TEXTILE WORLD

A McGraw-Hill Publication ..... APRIL • 1949

Good HANDLING OF YARN Pays

ANNUAL Knitting NUMBER

STARTS ON PAGE 93

More FOOT-CANDLES Mean More PRODUCTION

Higher production and lower costs were obtained by Bachmann Uxbridge Worsted Corp. in controlled tests to show the effect on production of raising and maintaining higher lighting levels. Details start on page 110.

GUIDE TO EXHIBITORS At Knitting Arts Exhibition

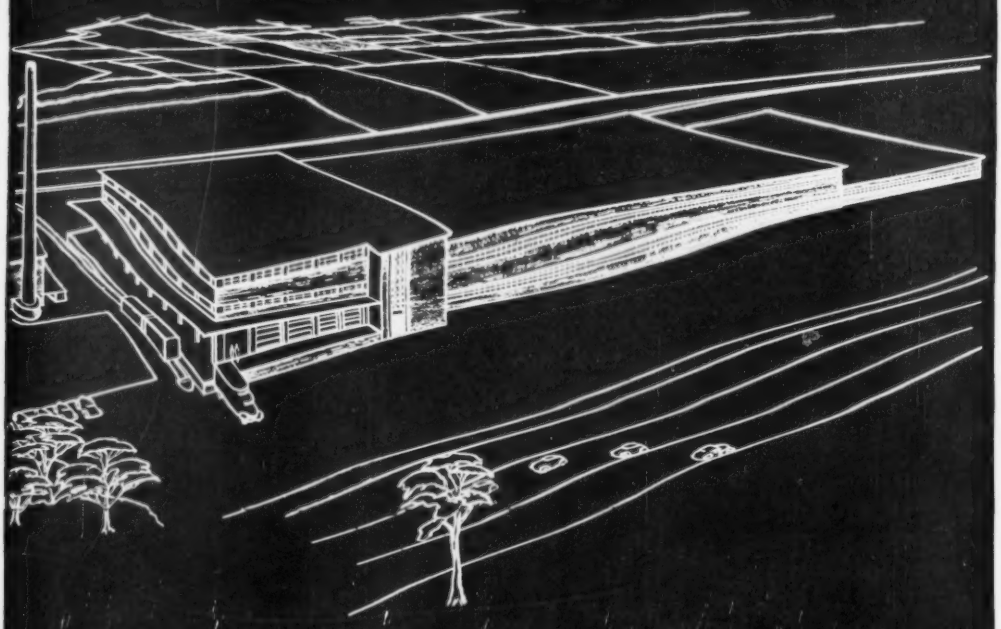
Planning to attend the Knitting Arts Exhibition, April 25 through 29? A full alphabetical list of exhibitors, giving booth numbers, products displayed, and representatives, along with a floor plan of the show, begins on page 175.

Cotton Mill Builds Larger YARN PACKAGES

A yarn-per-bobbin increase of 54.28% was gained at Tallassee Mills by changing from 10- to 12-in. bobbins, and from 2½- to 2¾-in. rings. The full story of this and other advantages gained is on page 108.

Thirty-One Years' Nationwide Experience

In Industrial And Textile Development



TEXTILE ENGINEERING

COTTON SILK RAYON
WOOL NYLON

• Appraisals, modernization studies, machinery layouts, air-conditioning, power and water filtration plants, community developments, and other phases of textile engineering.

ROBERT AND COMPANY ASSOCIATES
INCORPORATED
Architects and Engineers
ATLANTA

TEXTILE WORLD, Vol. 89, No. 4, April, 1949. Published monthly by McGraw-Hill Publishing Co., Inc. (Bragdon, Lord & Nagle Division). Publication Office, 99-129 North Broadway, Albany, N. Y. RETURN POSTAGE GUARANTEED. Editorial and Executive Office, 330 W. 42nd Street, New York 18, N. Y. Allow at least ten days for change of address.

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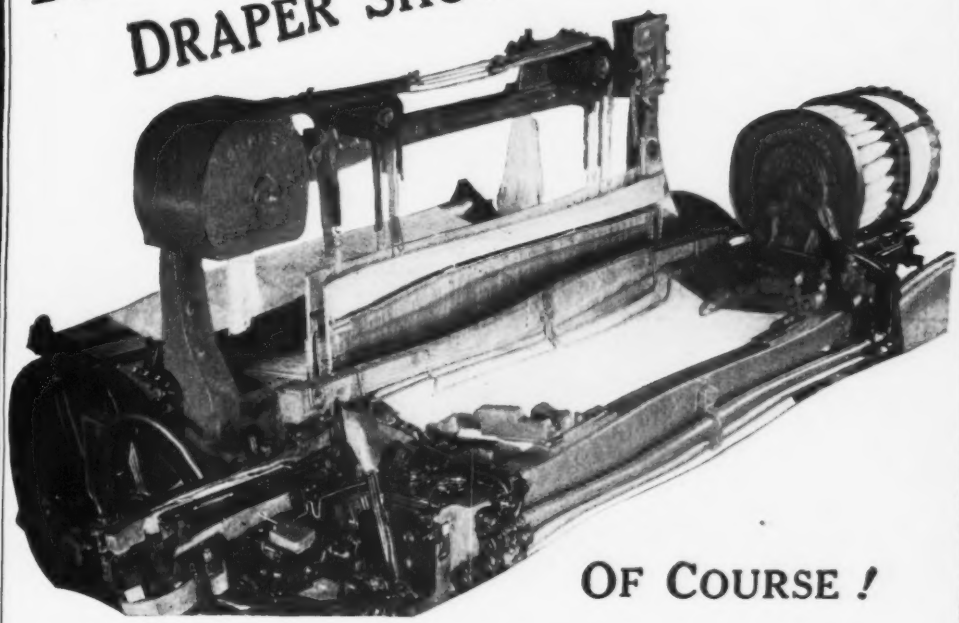
DRAPER LOOMS SUGGEST DRAPER SHUTTLES



OF COURSE !

No one is better equipped to design and manufacture the shuttle to suit your weaving needs than the company that builds your looms. DRAPER knows your problems — has made your custom-built shuttles ever since we introduced the automatic loom over 50 years ago.

More than 13,400 different Draper shuttles have been designed to satisfy different requirements.

New features — especially new eyes for every cotton, rayon, woolen and worsted yarn — are constantly being developed. See our May "Cotton Chats" for particulars.

Whatever your shuttle problem — Let's Talk It Over.

DRAPER CORPORATION

Atlanta, Ga. Hopedale, Massachusetts Spartanburg, S.C.

keep oil off yarn and fabric

Use the lubricant that lives up to its name . . . Texaco Stazon

A BEARING that is close to yarn or fabric calls for a lubricant that won't splatter, creep or drip. Use *Texaco Stazon*. It *stays on* the bearing surfaces, *stays off* the goods. Mills everywhere say it's the best remedy for oil stain "headache."

Texaco Stazon has remarkable stability. It does not form gummy deposits . . . is not affected by humidity . . . is a long lasting and economical lubricant. Use it on top rolls . . . for loom lubrication . . . wherever protection from oil stain is indicated.

Talk to a Texaco Lubrication Engineer about more efficient and economical lubrication throughout your mill. Just call the nearest of the more than 2300 Texaco Wholesale Distributing Plants in the 48 States, or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

TEXACO

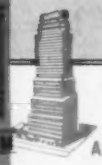
TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

Tune in . . . TEXACO STAR THEATRE every Wednesday night starring Milton Berle. See newspaper for time and station.

TABLE OF Contents

TEXTILE WORLD



Vol. 99 - No. 4
April, 1949
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Yarn Manufacture	Weaving	Knitting	Finishing	Engineering	Miscellaneous	CLASSIFIED ACCORDING TO READER INTEREST ⬅ MILL DEPARTMENTS / FIBER DIVISIONS ➡ — FEATURE ARTICLES		Cotton	Rayon	Wool	Synthetic
Y	W	K	F	E	M	ANYTHING to Win (*Editorial*)	4	C	R	W	S
		K				FULL-FASHIONED Experiments With Yarns	93		R		
		K				Handling of WOOL YARN Affects Fabric	95			W	
		K				PRESS-OFFS and STOPS Reduced	96		R		
		K				CIRCULAR HOSIERY Holds Yarn Quality	98	C	R	W	S
		K				TRICOT Handling System Designed by Mill	100		R		
		K				OUTERWEAR Mills Stress Handling, Feeding	102	C	R	W	S
		K				UNDERWEAR Men Watch Yarn and Feeding	104	C	R	W	S
Y	W	K	F	E	M	Value of RECREATION Recognized by Mills	106	C	R	W	S
Y						Cotton Mill Builds Larger Yarn PACKAGES	108	C	R		
Y	W		F	E		More FOOT-CANDLES Mean More Production	110			W	
Y	W	K	F	E	M	What One Mill Did About HOUSING	114	C	R	W	S
Y	W		F	E		Bates Restores THIRTY-YEAR-OLD FLOORS	116	C	R		
Y					M	Use FIBER TESTS to Raise Yarn Strength	118	C			
			F	E		73% CAUSTIC SODA Saves Plant Money	121	C	R		
	W			E		HARNESS HOLDERS Aid in Dropping Wires	125	C		W	S
Y						Don't Blame Static if COTS LAP UP	127	C		W	S
	W		F			Synthetic DETERGENTS Have Broad Use	129	C		W	S
		K		E		Air Conditioning Aided by MAGNETIC DRIVE	131		R		
Y						New CARD CLOTHING Cuts Need to Strip	135			W	
Y						Fiber Meter Makes BLENDING Automatic	137	C		W	S
			F			Dyeing WORSTEDS for Hard Wear	139			W	
		K			M	Guide to EXHIBITORS at Knitting Show	175	C		W	S
						KINKS AND SHORT-CUTS					
	W				M	4,200 LOOM-PICK Readings Taken in 5 Hr	158	C		W	S
Y	W	K	F		M	DESK on Lift Truck	160	C		W	S
Y	W		F	E		BALL-WARPER Stops Aided by Switch	160	C		W	S
Y	W	K		E	M	Small Parts CLEANED by Tumbling Cylinder	162	C		W	S
Y	W	K	F	E	M	Light Bulb DRIES CLOTHES	162	C		W	S
	W		F			Rayon-Yarn CUT MARKS Used on Worsteds	162			W	
				E		Conveyor SAFETY SWITCH	162	C		W	S
Y	W	K	F	E	M	In-Plant SMOKING AREAS	162	C	R	W	S
				E		WIRE STRAIGHTENER Made of Old Gears	162	C		W	S
Y						Oiled Pin Reduces LAP-TAIL WASTE	164	C	R		
		K				WOOLEN-SOCK Production Almost Doubled	164			W	
Y						Wing-Nut TIGHTENER on Fallow Wires	166			W	
				E		Switch Stops SCREWDRIVER	166	C	R	W	S
						IN OTHER DEPARTMENTS					
Y						Frame Stop Motion Improves ROVING	141	C	R		
			F		M	CHLORINATOR Has Unique Features	142	C		W	S
Y						Light FLYERS for Fine-Yarn Twisting	142		R		
	W			E		STRAPPING-TOOL Mount Is Handy	142	C		W	S
		K		E		Centralized LUBRICATION for Reiner Tricot	144		R		
			F			Adhering Machine Speeds SCREEN PRINTING	144				S
		K				Komet LINKS-AND-LINKS for Infants' Socks	144	C		W	
			F			Herringbone-Hump REEL for Better Dyeing	146	C		W	
	W		F			Hand PERCH Has Aluminum Measuring Roll	146	C		W	
	W					WEAVING Accessories Have Extreme Hardness	148	C		W	S
		K				STOP MOTION Leaves Yarn in Position	148		R		
		K				Prevents F. F. Machines BACKING UP	150		R		
			F			New Machine for HEAVY-SEAMING WORK	150	C	R		
Y				E		Curtains of Air Combat LINT and FLY	152	C	R		
Y	W					Electronic Motion Cuts Harsh BANG-OFFS	154			W	
Y						Unique Principle in VARIABLE-SPEED Unit	154	C	R	W	S
Y	W	K	F	E	M	Reader Backs Our Stand for STANDARDS	168	C	R	W	S
Y	W	K	F	E	M	Use Your SLIDE RULE on Mill Problems	168	C	R	W	S
Y	W	K	F	E	M	SAFETY Can Cut Your Costs	172	C	R	W	S
		K		E		Changing NEEDLE GAGE Is Overhauling Job	230	C	R	W	S
			F		M	Defective EMBOSSING Causes Dye Breaks	234		R		
	W					Washboard Shuttles Give WEAVING Trouble	236		R		S

Edwin D. Fowle — *Publisher*
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DEPARTMENTS

Editorial	4
Free for the Asking	261
Kinks and Short-Cuts	158
Mill Maintenance	286
New Dyes and Chemicals	278
News About Men	314
News About Mills	304
News About Suppliers	296
News of the Month	290
Pointers for Supervisors	157
Questions and Answers	230
Reviews of Books	288
Round Table	168
Textile Calendar	290
Textile Equipment News	141
Useful Accessories	282

THE *Long-Range* VIEW

Anything To Win

Both flag-waving and threats of bloodshed have failed as tools of the CIO in trying to force the organization of Southern workers. Latest tactic is to try religion—it is clear that Van A. Bittner will try anything to "self-organize" a group of workers who have unmistakably shown their aversion to the CIO and its methods.

Evidently, the professional organizers have found out, as persons close to the South have long known, that Southern textile workers take religion seriously. So now, the latest Southern drive is classed as "a crusade in which if Christ was on earth He would be leading it." (The grammar is CIO's.)

An important part of the new plan of attack is for organizers to get "acquainted" with ministers, attend church and Sunday school, establish a "reputation" for an interest in religion, and use the religious-crusade theme for all it is worth.

Back of this approach (which will be coupled with a drive to win the support of local merchants and businessmen) is the open threat that employers can "take organizing the easy or hard way, but they will get organizing, take your choice."

This new approach may fool a few more Southern textile workers—each drive, although ending in a dismal failure, does secure a few more members. But we predict that this latest siege will fail, just as we predicted on this page last July that the 1948 drive would go down in inglorious defeat, as did the 1947 phase of Operation Dixie.

We make this prediction based on our own Southern background and that of most of our staff. We know that Southern textile employees are too genuinely religious not to see through the effort to use the church as a mask. We smile inwardly as we reflect on the embarrassing situations that are sure to arise when organizers are expected literally or figuratively to sign the pledge found in many churches in Southern mill communities.

We do not think that Southern ministers will be deceived into being used for the advantage of union organizers. It is hard for us to see what sound appeal professional organizers can make to the workers in the many fine Southern textile mills. Mill owners have long recognized that it is good business to pay adequate wages, maintain excellent working conditions, and give as many social benefits as possible.

We are not trying to whitewash the whole Southern textile industry—most of it is inherently clean. The organizers are less interested in the few mills which could stand whitewashing; they are gunning for the leaders, hoping that if they are bagged others will be easy to get.

The professionals being used in this drive will undoubtedly be a tougher group than the ex-GI organizers that failed in a past attempt when flag-waving was used as an appeal. They are less likely to succeed than GI's who, in the main, were recruited from Southern towns. Outsiders have been and will continue to be resented in their efforts to "self-organize" textile-mill employees.

Our chief objection to this latest organizing effort goes beyond the threat to use force to "self-organize" employees. It is the insincere methods used, chiefly that of brazenly endeavoring to use the church to achieve their goal.

To try to twist the teachings of Christ to serve the ends of the CIO is about as sure a way as we know to guarantee that this third major Southern drive not only will fail but also will react against the CIO. The organizers have overlooked the fact that Southern textile workers are genuinely, not superficially, religious.

C. H. Bendigo

It's new...

RHOADS TANNATE-ROCKWOOD LOOM DRIVE

The new Rhoads TANNATE-ROCKWOOD Loom Drive consists of:

- A new double pivoted motor base
- A motor pulley
- A TANNATE motor belt
- Two intermediate shaft pulleys
- An intermediate shaft, and
- A TANNATE loom belt

It has the following qualities:

- It's quieter; assures less shock and vibration; permits the easy change of loom speed; and, provides maximum production through constant belt tension. Write for details.

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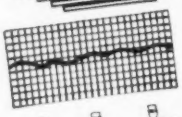
Case history of the SACO-LOWELL *continuous* Card Stripper

(name on request)

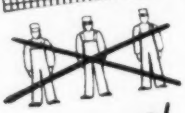
Strippers in operation **445**

Obtained 77% increase in time between grindings

No difference in break of yarn



Maintenance problems ... routine!



General comment on performance – "much pleased"

100%

COMMENTS

Here's a case where it was, obviously wise to

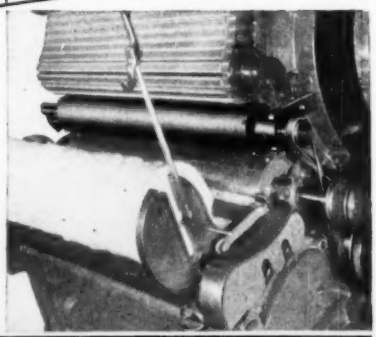
SACO-LOWELLize!

...Easy to install,

on practically all revolving flat cards, the SACO-LOWELL Continuous Stripper *operates without added cost.* It recovers up to 2% additional fibre, reduces waste, nep count and lost production . . . makes a cleaner and more uniform sliver.

STATISTICS SHOW that this Continuous Card Stripper will liquidate its capital investment in about 14 to 16 months!

On request to our nearest Sales Office, we will send you literature giving full information.



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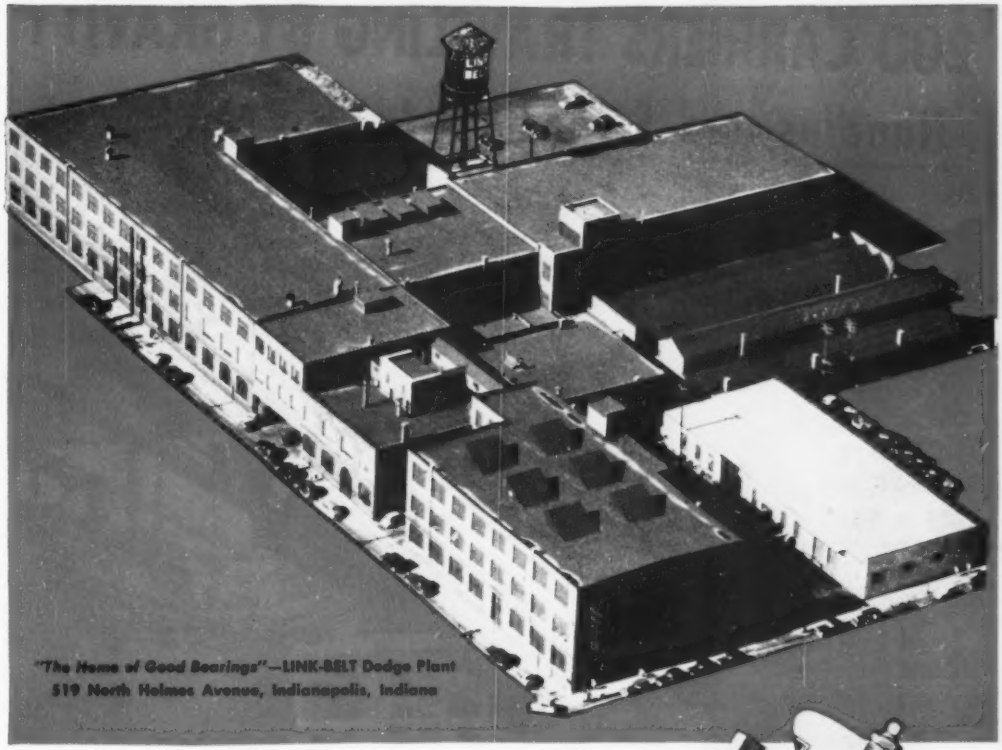
One LINK-BELT Plant devoted *Solely* to bringing you better bearings—*Quickly*



"The Home of Good Bearings"—LINK-BELT Dodge Plant
519 North Holmes Avenue, Indianapolis, Indiana

Meeting industry's ever-increasing demands for ball and roller bearings that offer the desired combination of free-rolling action, self-alignment, and long life is no small-sized job.

That's why the entire capacity of Link-Belt's Dodge Plant in Indianapolis is devoted to this important task.

From the receipt of housing castings furnished by sister plant foundries to shipment of finished mounted bearings, alert design engineers, skilled craftsmen and the most modern bearing production machinery work hand-in-hand to turn out the bearings that enable users to TURN SHAFTS EFFICIENTLY.

Cut-away view of Series 200 Ball Bearing Pillow Block

LINK-BELT COMPANY

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LINK-BELT

Ball and Roller BEARINGS

UNUSUAL *Automatic System* HAS 200 CARRIERS TRAVELING BY GRAVITY

Handles and Stores Empty Hosiery Trucks

WHAT THE SYSTEM HAS ACCOMPLISHED

1 Time spent pushing and handling hosiery trucks has been drastically reduced.

2 Large storage warehouse which would be required for storing the trucks is saved because overhead ceiling space is now used for this purpose.

3 If it were not for the Tramrail System, a new building addition would probably have been necessary.

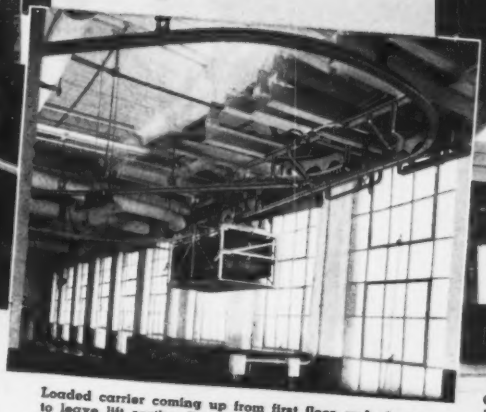
4 An elevator on which the trucks formerly were taken from the first to third floor has been relieved of work that formerly taxed its capacity.

5 The cost of an additional elevator which would have been necessary to take care of additional trucks required because of greatly increased output, was saved.

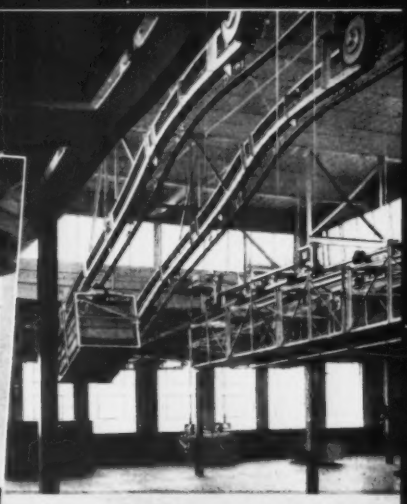
6 Costly maintenance formerly required because of hosiery truck castors wearing floors has been largely eliminated.

7 The system introduced an efficient means of handling the trucks, expedited their delivery, and greatly cut the costs of this work.

Loading station on first floor. Two empty hosiery trucks are elevated to third floor on each trip. Depressing pushbutton (on wall) starts carrier up and on its way. As soon as it has cleared lift section D on third floor, another empty carrier comes down to this position automatically.



Loaded carrier coming up from first floor and about to leave lift section D. The carriers have no motors or other propelling drives. They are equipped, however, with centrifugal brakes to prevent excessive speeds.

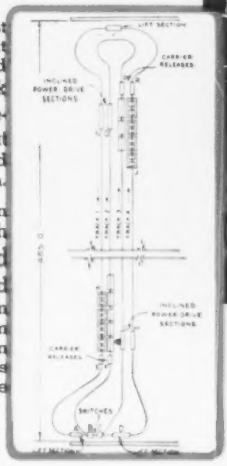


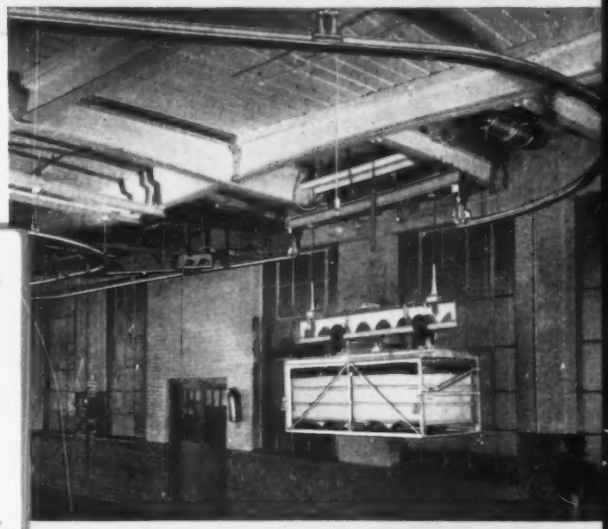
Carrier being taken up to high end of track 4 on inclined power drive section H. This carrier has just left lift section D.

A CLEVELAND Tramrail system at Hanes Hosiery Mills Company, Winston-Salem, North Carolina, producers of ladies' nylon and rayon hosiery, is unique because while it is entirely automatic in operation, its 200 carriers run by gravity. The carriers convey and store empty hosiery trucks, handling two at a time.

The trucks are carried from the first floor to the third floor on a lift section at D (see sketch) and travel by controlled gravity down track 4 and return on track 3, on which they are stored until required. Trucks in storage are released at lift section A, but also may be released at J by stopping carriers passing through.

After the trucks in a carrier have been removed at A, the carrier travels through switches B and C, down track 3 and returns on track 2, where it is stored until needed on the first floor. As soon as a loaded carrier is dispatched from the first floor and leaves lift section D on the third floor, another carrier comes down and takes its place, ready for more empty hosiery trucks.





Lowering a carrier at lift section J where trucks will be pushed out on floor. The section will then be raised so that it interlocks with stationary track and carrier will continue on its way automatically.

Only seven motors are required for the entire system. These operate the three lift sections and the four inclined power drives which convey the carriers to the high ends of tracks. This is one of many types of Cleveland Tramrail automatic dispatch systems now in operation in a number of Textile Mills.

GET THIS BOOK!
BOOKLET No. 2008. Packed with valuable information. Profusely illustrated. Write for free copy.

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THE CLEVELAND CRANE & ENGINEERING CO.
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OVERHEAD MATERIALS HANDLING EQUIPMENT

Accotex
Armstrong's
PAT. PENDING
ACCOTEX COTS
CORK COTS

Aprons last longer

After more than five years of service on mill frames

many Accotex Aprons still spin quality yarn

With Accotex® Aprons on your frames, you get longer service—more than five years of spinning top-quality yarn in many mills. Downtime due to premature apron failure is virtually eliminated. With Accotex, aprons generally are replaced only during normal overhauling periods.

This extra long life is built into every Accotex Apron by a process developed at Armstrong. Heavy layers of specially compounded synthetic rubber enclose a non-stretch cord interliner and provide tough wearing surfaces on both the inside and the outside of the apron.

There are no seams in Accotex Aprons to crack and tear open. Since they will not scuff, they produce cleaner running work, with less waste. They are not affected by oil, temperature changes, or humidity. They perform with a minimum of lapping.

See for yourself how Accotex Aprons will help you maintain high-quality production at lower cost. Ask your Armstrong representative for samples, prices, and additional information. Or write to Armstrong Cork Company, Textile Products Department, 8304 Arch Street, Lancaster, Pennsylvania.

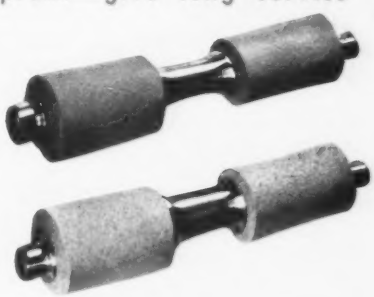
Armstrong's Accotex Aprons are available for single apron and double apron long draft equipment, for roving as well as spinning frames. They are ground to the exact thickness you specify. Accotex Long Draft Aprons are absolutely uniform in density and over-all dimension.

ACCOTEX COTS—like Accotex Aprons—give long service

ACCOTEX J-490 . . . a plain synthetic rubber covering especially useful where synthetic fibers are run on cotton system equipment or wherever maximum lap-resistance is necessary. After long initial service life, J-490 Cots may be rebuffed 5 or 6 times.

ACCOTEX NC-727 . . . a cork-loaded synthetic rubber cot that combines the superior drafting properties of cork with the long life of rubber. Because of the cork content, NC-727 produces less eyebrowing than any other synthetic cot. It resists slicking and drafts a more uniform and stronger yarn.

Whether you are spinning cotton, wool, or synthetic fibers, Armstrong can supply you with a cover especially formulated for the job. Your Armstrong representative will gladly arrange a test installation in your mill. Available for export.



ARMSTRONG'S ACCOTEX APRONS

Announcing a New Product . . . the
ALLEN WARPER CREEL

Features

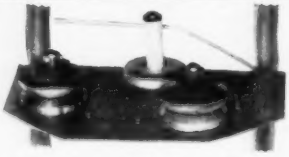
Magazine cone arms, which hold any type package by using adapters where necessary.

Bor-Al-Sil pigtail guides, giving longest known wear, permitting quickest possible threading. This feature eliminates many common troubles.

Conventional stop motion.

Tension device suitable for all types of yarn. Correct tension is obtained at all times by using one or two tension posts, and changing their position in the various tension plate holes, depending entirely upon the yarn.

Unit construction provides capacity for any number of ends.



Tension adjustable for all fibres

Magazine package arm

Bor-Al-Sil Pigtail Guides
for easy threading, maximum life

Here is a Warper Creel designed to meet the demands of High Speed Warper users. The dependable and continuous delivery of this creel enables mills to get the real maximum of production from their warping equipment. Have our representative explain the many features.

NEW WARPER CREEL BULLETIN MAILED YOU ON REQUEST

Cotton and Rayon Beam Warpers
High Speed Warper Creels
Ball Warping Machines
Narrow Fabric Warpers
Warper and Loom Beams
Intermediate Dresser Stand for Woolen and Worsted Warp Yarns
Expansion Neck Reeds
Jack Spooler Creels
All types of Expansion, Warper, Beamer and Slasher Combs
Replacement parts for Saco-Lowell and Entwistle Warpers

NEW BEDFORD, MASS. ALLEN COMPANY

ALLEN
COMPANY
General offices — 156 River Road
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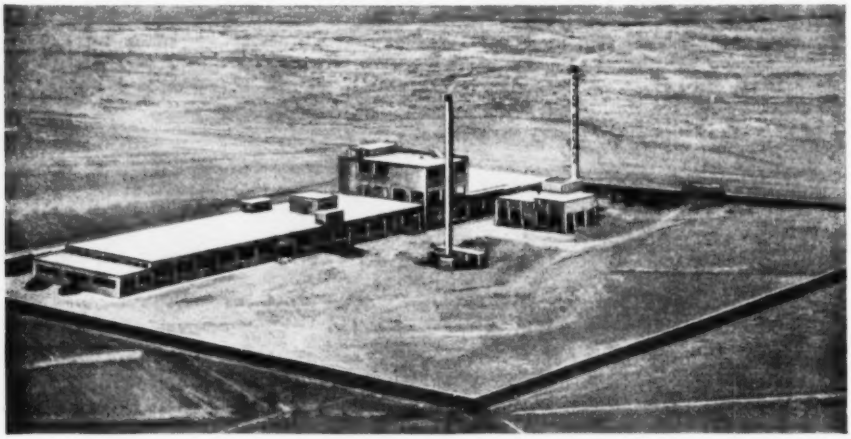
Representatives in all Textile Localities and all Principal Countries of the World.

The name back of these ball bearings is your assurance of the performance that keeps your product sold to the ultimate consumer.
NEW DEPARTURE
BALL BEARINGS
NEW DEPARTURE • Division of GENERAL MOTORS • BRISTOL, CONNECTICUT
Nothing Rolls Like a Ball . . .

KOHORN



Rayon Production in Peru

Rayon Peruana S. A., the only rayon plant in Peru, was built in seventeen months by Oscar Kohorn & Co., Ltd. Operation began in October 1946 under Kohorn technical management. The company paid dividends beginning with its first year of operation. The plant furnishes badly-needed rayon to Peruvian weavers and knitters.

Again, in this Peruvian plant, *actual production* for two and a half years proves the unique, superior ability of Kohorn to establish and operate new rayon plants for Textile Manufacturers and Investors. Based on more than thirty-five years' experience—tested in terms of profitable operation—Kohorn engineering, rayon machinery and technical management provide priceless security where Rayon Manufacturing is to be newly developed. Consult us freely, without obligation.

COMPLETE PLANTS for Filament Rayon, Rayon Staple Fiber and Cellophane Equipped in 12 months.

OSCAR KOHORN & CO., LTD.

EXECUTIVE OFFICES

501 FIFTH AVE. NEW YORK 17, N. Y., U. S. A.

Pioneers of the Rayon Industry

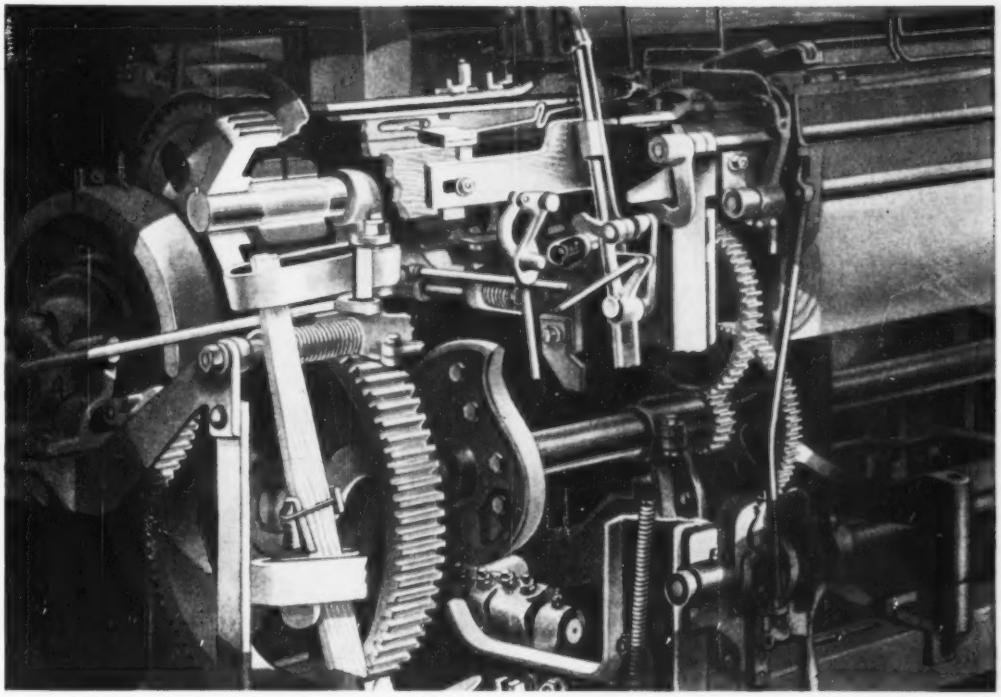
Inside Knowledge on Lubrication Problems

—SHOCK LOADS—

This is One of a Series of Messages on Common Problems in Your Mills

Torture Rack

FOR OIL AND GREASE!



THAT'S WHAT YOU might call your loom . . . a torture rack for oil and grease. For here, more than any other spot in your mills, oil and grease really take a beating.

On those cam, crankshaft and pick bearings, for instance, you get continued shock loads that seek to smash your lubricant out, cause metal-to-metal contact and wear. You also get contamination from flying bits of lint.

Gargoyle Vactra Oils and Gargoyle AA Greases are solving this problem in many mills. These special shock-load lubricants cling tightly to the metal, resist rupture, reduce wear to a minimum.

* * *

High-quality Mobilgreases perform the same job on gears, pick cams and pick balls, resist the constant pounding and the wiping, sliding action. Your looms stay on the job more continuously to produce more cloth at lower costs.

GARGOYLE Lubricants

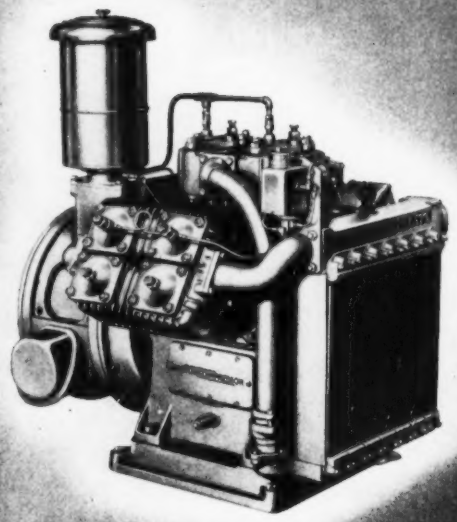
SOCONY-VACUUM

SOCONY-VACUUM OIL CO., INC. and Affiliates: Magnolia Petroleum Co. General Petroleum Corporation

Socony-Vacuum Correct Lubrication

FOR EVERY MACHINE . . . EVERY OPERATING CONDITION

WHY THEY LIKE THE MOTORCOMPRESSOR



WHAT IS A MOTORCOMPRESSOR?

An Ingersoll-Rand two-stage, air-cooled compressor with a built-in motor . . . made in five sizes from 25 to 75-hp

WHAT IS IT FOR?

Compressing air to pressures up to 125 psi. It is ideal for main air supply . . . or for supplementing the capacity of larger compressors during peak loads . . . or for locations remote from main compressed-air lines . . . or wherever the advantages of air-cooling are important.

WHO LIKES IT?

Maintenance men, engineers, owners, and workers who rely upon a steady supply of Air Power . . . in mills, factories, mines, railroad yards, foundries, construction jobs, and aboard ship.

WHY THEY LIKE IT?

- Air-cooling eliminates the cost of water, water piping, and the danger of freezing.
- Two-stage compression saves power.
- Channel Valves are durable, efficient, stay tight.
- No need for special foundation.
- Compact and lightweight . . . easy to install or relocate.
- Timken tapered-roller main bearings.
- Constant-level lubrication is simple and trouble-free.
- Dual Control provides efficient regulation under any kind of load . . . a selector switch permits use of either constant-speed or automatic-start-and-stop control.
- Dependable in operation . . . easy to service and maintain.
- Built by Ingersoll-Rand . . . by the men who know Air Power, and who build both the compressors that generate it and the tools that use it.

AIR POWER . . . The Key to Lower Production Costs

1-980

Ingersoll-Rand

11 Broadway, New York 4, N. Y.

COMPRESSORS • AIR TOOLS • CONDENSERS • CENTRIFUGAL PUMPS • ROCK DRILLS • OIL ENGINES

SANDOZ PRESENTS
the color achievement of the month

Taupe and Counterpoint

...BY MIRON

Pert as an April blossom, this young lady is ready for town in her suit of basketweave worsted — taupe and pink plaid skirt, plaid-trimmed taupe jacket — woven from 100% virgin wool by Miron Mills.

Many top designers use Miron fabrics for many reasons, and one of them is Miron's choice of colors. For fabrics like those shown, such Sandoz dyestuffs as

METOMEGA CHROME BROWN 3GL, Pat.
METOMEGA CHROME BORDEAUX 2BL

provide long color life, being particularly stable through the severe mill treatments of fulling, carbonizing and decatizing which are not kind to many dyes.

For any chrome, acid or direct dyes... or auxiliary chemicals...for both natural and synthetic fibres ... be guided by the successful "color achievements" you see in these Sandoz advertisements.

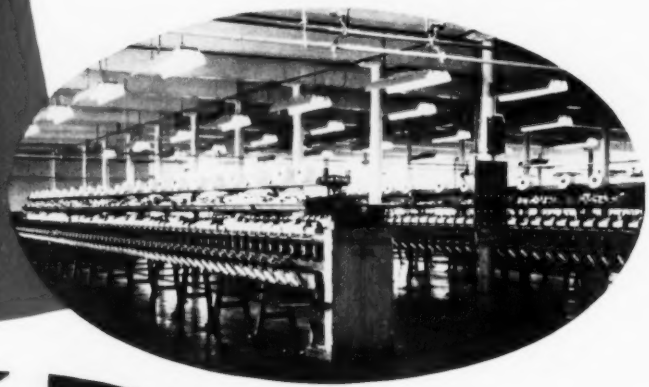
SANDOZ CHEMICAL WORKS, INC., 61 VAN DAM STREET, NEW YORK 13, N.Y.
Application laboratories and stocks at Boston, Philadelphia, Charlotte, Chicago, Los Angeles, Toronto • Other branches at Providence, Paterson and Montreal

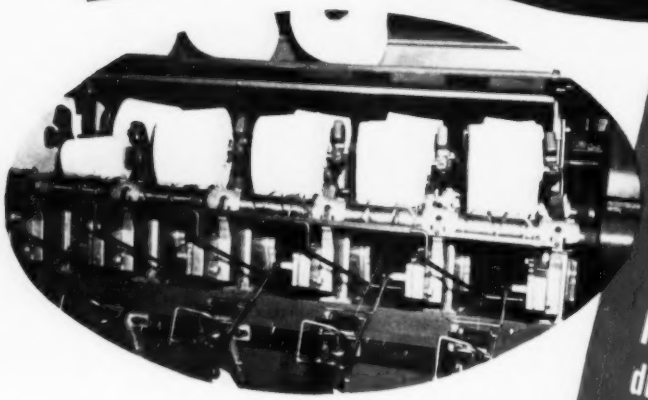
S N D *thinks ahead with textiles* S

SMOOTH WINDING of Spun Rayon at Paul Whitin Company

Spun rayon yarn is wound onto warping cones at the Paul Whitin Company, Northbridge, Mass., by the Roto-Coner*, the modern drum winder built around the exclusive rotary traverse.

This grooved roll, in addition to rotating the winding package, also traverses the yarn. Both the conventional reciprocating guide and the slip drum are eliminated, and with them, a constant hazard to yarn quality.





SMOOTH OPERATION of Roto-Coners* due to Modern Design

The streamlined design of the Rotor-Coner* winder provides many operating conveniences. Starting handles, tensions and shelf for finished packages are conveniently located. Lint-proof housing protects the operating mechanism, open design makes cleaning easy. A conveyor belt takes away empty bobbins. And the machine runs quietly, without annoying clatter.

In the photograph, note the cast-iron rolls recommended for spun rayon and also the combination blade-and-needle slub catchers.

UNIVERSAL WINDING COMPANY

P. O. Box 1605 • Providence 1, R. I.

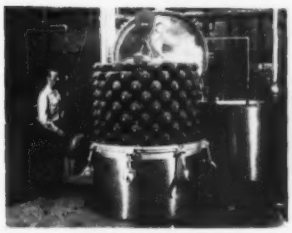
Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Basle, Switzerland

Agents in every principal textile center throughout the world

* Reg. U. S. Pat. Off.

ROTO-CONER* *the only machine with the rotary traverse*

Investigate this efficient dyeing equipment



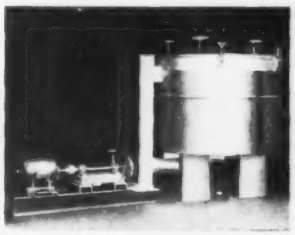
MODEL KRAG COTTON PACKAGE DYEING MACHINE

STIENEN

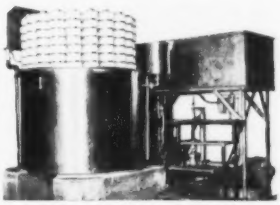
Lead with the LEADER

OBERMAIER

COPYRIGHT 1948, E. A. STIENEN, NEW YORK



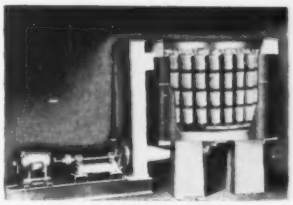
NUAPR WOOL RAW STOCK DYEING MACHINE



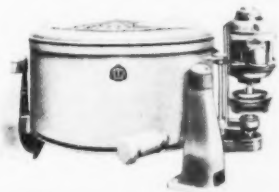
MODEL KRAKU RAYON CAKE DYEING MACHINE

These outstanding machines are the result of a century of continuous research, development, and experience.

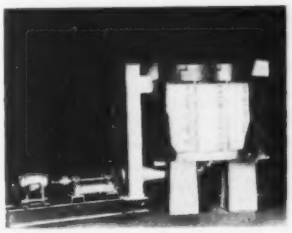
Standard Fabricators Inc. have maintained their position, as leading manufacturers and designers of yarn and raw stock dyeing equipment, and have constantly gone forward in perfecting machinery for the yarn dyeing industry.



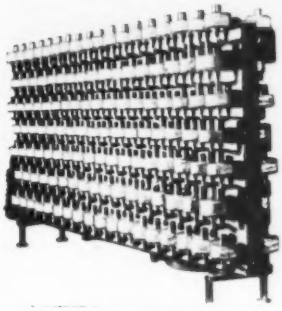
NUAKO WORSTED PACKAGE DYEING MACHINE



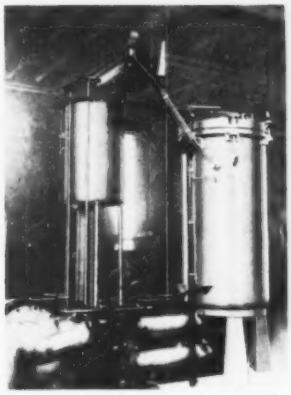
HIGH SPEED EXTRACTOR, KINE-MATIC BRAKE AND DRIVE



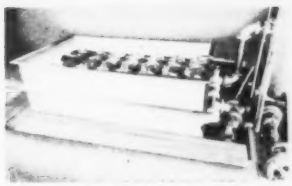
RAPR SPINDLE WORSTED TOP DYEING MACHINE



RAYON CAKE DRYER



MODEL KAM COMBINATION BEAM AND PACKAGE DYEING MACHINE CAPACITY UP TO 2000 LBS.



WORSTED TOP POT DYEING MACHINE

Standard Fabricators

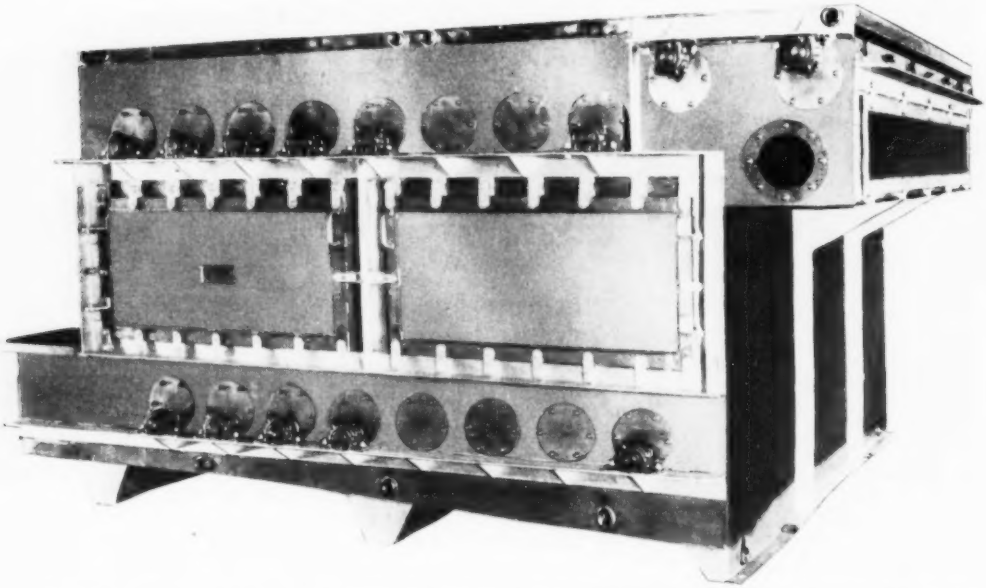
355 WALTON AVENUE INCORPORATED NEW YORK 51, N. Y.

BUILDERS OF Stienen—Obermaier EQUIPMENT

"STIENEN" RAYON CAKE DYEING MACHINES — RAYON PACKAGE DYEING MACHINES

"STIENEN" KINE-MATIC DRIVE AND BRAKE CENTRIFUGAL EXTRACTORS

"STIENEN-OBERMAIER" DYEING MACHINES, EXTRACTORS, AND DRYERS FOR WOOL AND COTTON INDUSTRIES



Stainless Steel Steam Ager for Pad Steam Dye Range

Engineered for Pepperell Manufacturing Company

You too can benefit with stainless steel equipment. Tower Iron Works was a pioneer in the design and fabrication of stainless steel. Our large and competent staff of engineers can help you with your modernization program.

We are now pleased to announce that O. B. Graichen is associated with us as a textile engineer. He has specialized in dyeing and finishing for many years and will serve as our representative.

Write to O. B. Graichen, Textile Division, or phone Gaspee 4715

FOUNDED 1835 ★ OUR 2ND CENTURY OF SERVICE

TOWER IRON WORKS

PROVIDENCE · RHODE ISLAND

CORROSION COSTS
$6,000,000,000.00
ANNUALLY!

No industry escapes...
how much do you pay?

Save needless waste

In one form or another acids, alkalis, salts, gases and atmospheric conditions cause corrosion damage. In every industry losses are prevalent – losses in time, materials and equipment, much of which could have been avoided. Minimize your risk – do these two things now –

1 – Check up on your costs;

2 – Provide adequate protection for danger points.

Experienced and competent Amercoat engineers are available to help you on both. They'll check up on your costs, which may be greater than you know because the effects of corrosion are often hidden. They'll report on conditions as they find them. They'll recommend steps to take if greater protection can be provided and money saved. Inquiries from interested executives will receive prompt attention. There's no obligation – write today.

AMERCOAT DIVISION
AMERICAN PIPE AND CONSTRUCTION CO.
Dept. IT, 4809 Firestone Blvd., South Gate, Calif.

EXAMPLE OF NEEDLESS LOSS — This 6" valve has been exposed to atmospheric conditions, near the sea-coast. Improperly coated, it was ruined in a short time.

FOLLOW THE LINE OF *most* RESISTANCE

A SYSTEM OF SURFACE PROTECTION

PRICES DOWN

on Geon Paste Resin

Large scale production brings savings to all users of this versatile product

PRODUCTION on Geon Paste Resin 121 (formerly 100 X 210N) has increased to the point where we are able to pass substantial savings along to our customers. For many operations this means reduced manufacturing costs and makes plastisol coating competitive with other coating methods.

Geon Paste Resin 121 brings you many advantages in coating processes:

1. ECONOMY

Operations are simplified and costs reduced because no solvent or diluent is needed. Mixing time is cut down because of the close particle size control. Workable pastes are made within 1 to 2 hours in standard mixers. Film thicknesses up to 25 mils can be produced with only two passes on the coating machine.

2. LESS SHRINKAGE

The absence of solvent or diluent makes the fused coating especially smooth and attractive, the finished product essentially strain-free.

3. SAFETY

No toxic or inflammable solvent or diluent insures safer operation—eliminates fire hazard—and justifies a lower insurance rate.

Some of the uses for Geon resin 121 plastisols

DIP-COATED ARTICLES—gloves, dish racks, plating racks and others.

MOLDING—toys and dolls, artificial fish lures, prosthetic devices.

COATING—textiles, paper, fiber-glass.

For complete information about Geon resin 121—prices, advantages, and uses—write or wire Dept. **L-2**, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio.

B. F. Goodrich Chemical Company

A DIVISION OF THE B. F. GOODRICH COMPANY

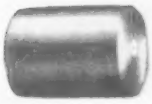
GEON polyvinyl materials • HYCAR American rubber • GOOD-RITE chemicals and plasticizers

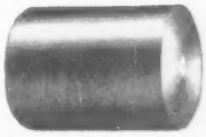
RIGHT ON THE BEAM

In plants where this new Van Vlaanderen Beamer is installed you can be sure that every yard is *right* on the beam—quickly and economically.

The logical development from our long and broad experience in designing and building fabric processing machinery, this new machine is designed and manufactured to the high Van Vlaanderen standard for long, trouble-free service.

Your inquiries are invited for early delivery.





SPECIFICATIONS

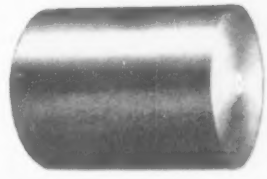
SIDE FRAMES: Extra rugged construction.

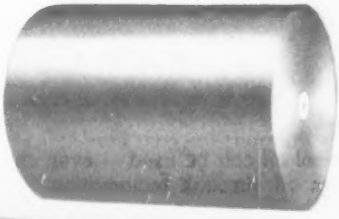
DRIVE: 3 h. p. variable speed motor drive with built-in gear reduction unit. Heavy duty single disk friction clutch for easy starting and stopping.

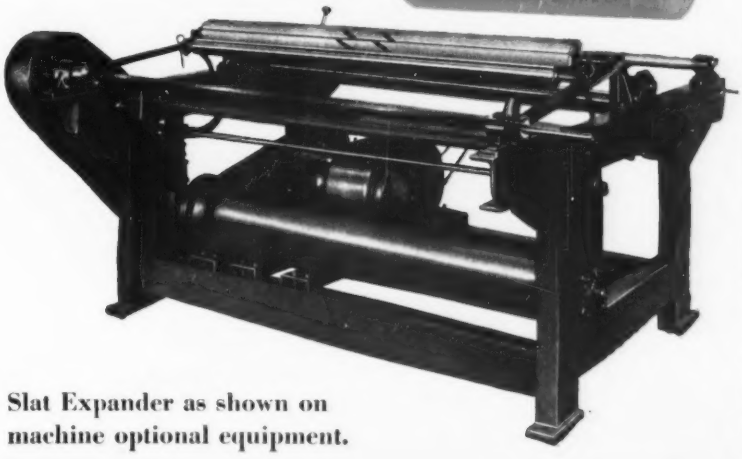
BEARINGS: Precision type ball bearings throughout.

GUIDE ROLLS: Heavy steel tubing chrome plated and polished.

OPTIONAL: Expander as illustrated on machine • Merrow railway sewing machine • Fabric measuring device • Roller cradle let-off



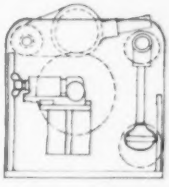




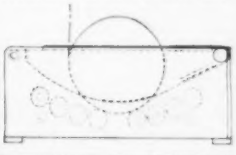
Slat Expander as shown on machine optional equipment.

OPTIONAL EQUIPMENT

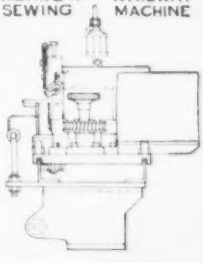
FABRIC MEASURING DEVICE



ROLLER CRADLE LET-OFF



MERROW SEWING RAILWAY MACHINE



VAN VLAANDEREN MACHINE COMPANY

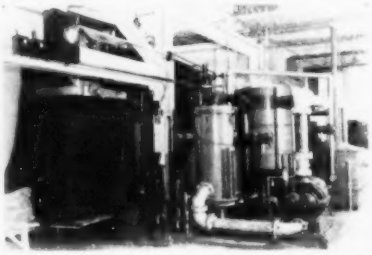
370 Straight Street • Paterson 3, New Jersey

World's largest manufacturer of machines for processing modern fabrics

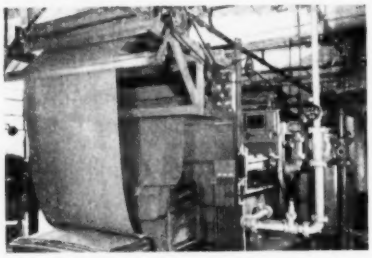
The Fleet Line

DERBY DRY CLEANER

VERSATILITY Is A Leading Characteristic



Installation in a New England mill making women's wear woolens.



Installation in a Maryland mill making cassimeres, flannels, tweeds and shetlands.

Fabrics now being handled by this machine include woolens, worsteds, rayon mixtures and mohair plushes. Although it involves a considerable investment and volume production, many machines are now in use. Constant improvement in design, greatly decreased solvent consumption and tremendous operating economies account for its popularity.

ADVANTAGES

1. Removal of tar, paint, asphalt, creosote, pigment, chalk, etc.
2. Almost any type of wool oil can be used — even cheap mineral oils.
3. Tremendous savings in oil, through reclamation.
4. Elimination of stream contamination from oil residue.
5. Reduces burling and mending.
6. Great reduction in perching.
7. Minimum oil content in the finishing room.
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For better lubrication of plain bearings and gears in spoolers and warpers

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Gulf Harmony Oil is an exceptionally stable lubricant—helps insure freedom from sludge deposits in bearing reservoirs or gear cases. It has outstanding lubricating qualities and is available in the proper range of viscosities to cover general spinning room requirements.

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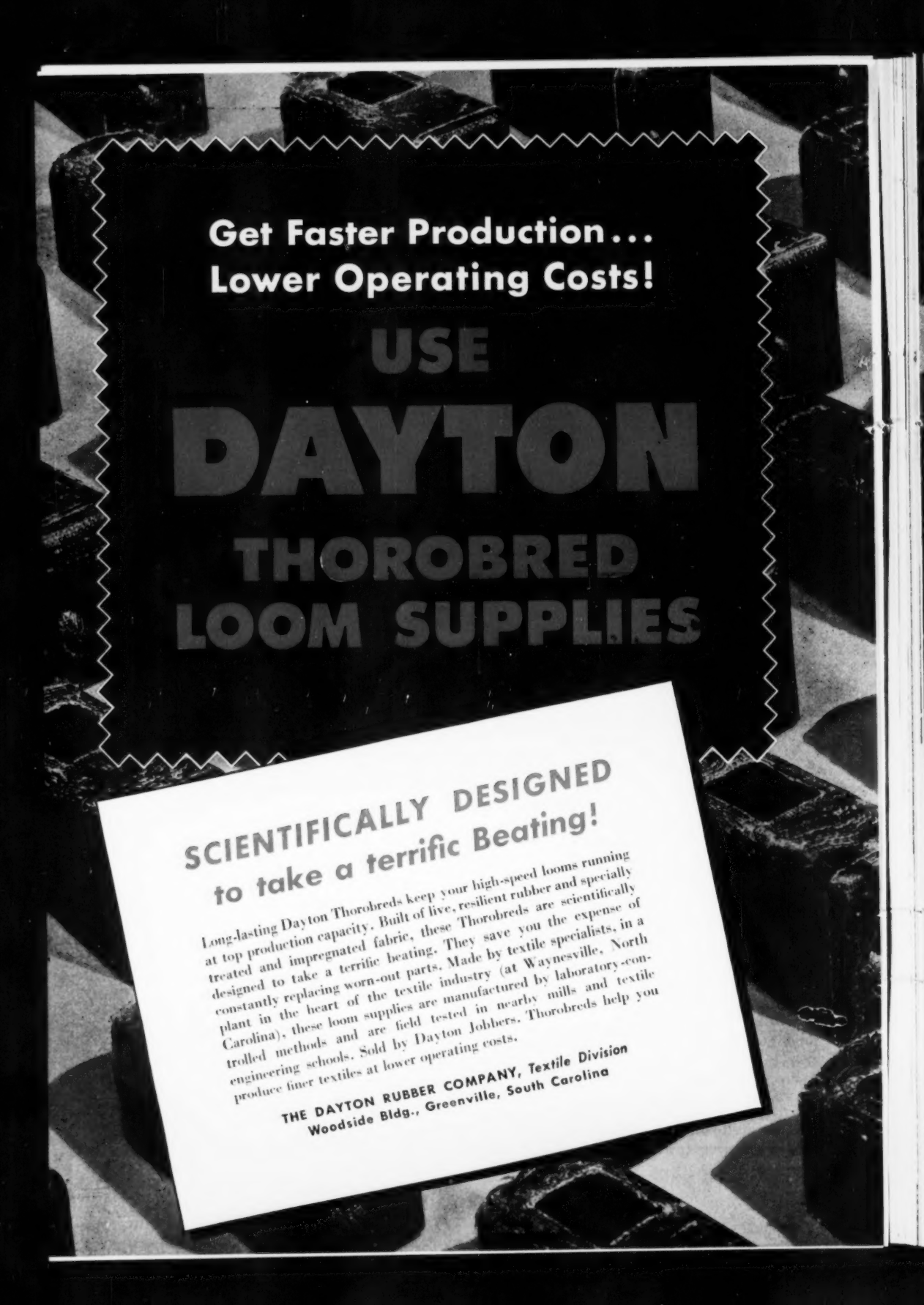
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This Reversible Drop Box Picker lasts longer and gives better shuttle contact. Made in a one-piece unit, it has three degrees of hardness. Very hard at spindle hole—won't wear egg-shaped—requires no lubrication. Soft around picker stick hole to absorb terrific impacts. Very soft at shuttle contact to assure perfect throws and eliminate shuttle point loosening. Non-reversible type has same construction.

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Built of extra tough fabric and resilient rubber molded together in a super strong unit. Stays put on stick. Easy to apply. Absolutely uniform. Assures a perfect shuttle throw. Eliminates shuttle bounce. Has twice the life of ordinary loop pickers.

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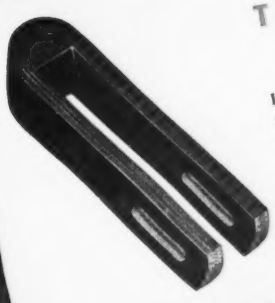

Built-in cushion protects cam points and picker stick. One-piece construction. No rivets. Never needs adjusting. Has proper "give" and ability to "come back" immediately. Easy to apply. Not affected by humidity. Gives trouble-free service and outlasts three ordinary lug straps.

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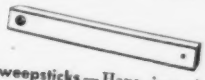

Sweepsticks—Have just the right resiliency. Not affected by temperature, moisture or oil. Will not "grow".

Hold-up Straps—Built of numerous plies of strong, squarely-woven fabric, bonded together with slightly flexible, yet long-wearing, rubber composition.

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Temple Rolls—Made from Dayco tubing. Are impervious to oils and chemicals. Resistant to abrasion, and can be used with all types of fabric.

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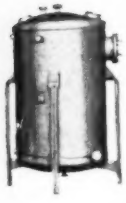
. . . curbs Corrosive Acids

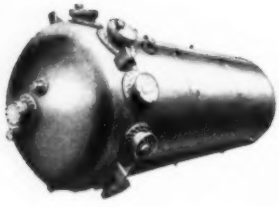
The "vessels" used in the process industries may range from a five-gallon receptacle to a cavernous tank. Details of construction may differ. But, when it comes to handling corrosive chemicals, much of this equipment has at least one thing in common . . . a lining of lead. Because *Lead blunts the teeth of hungry acids.*

Leaders in the chemical processing field have something in common, too. They rely on the leader in lead products . . . National Lead . . . for their lead-lined and lead-covered equipment. They know that National offers . . . *and delivers* . . . not merely a mass of metal bearing outward resemblance to drawing and blueprint, but a piece of acid-handling apparatus that has the built-in ability to do the job it was bought to do. Into each unit goes the know-how, from drafting board to shop assembly, that makes the most of lead's resistance to chemical attack plus steel's resistance to physical abuse.



In National Lead's "Homogeneous" lead-lined tanks, drums, agitators, autoclaves and other items of this nature, the lead lining is bonded directly to the steel casing. An inseparable bond is created, a union of lead and steel that obviously will withstand higher temperatures than one in which solder is used.

Every piece of National Lead's "Homogeneous" lead-lined and lead-covered equipment is individually fabricated to your specifications. When you want information on acid-handling apparatus, please consider our specialists in this field *at your service.*



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Micarta Lap Rolls now in use in leading textile mills (names on request) are helping to step up production, cut costs.

Cut deadweight 46%

with Micarta Lap Rolls

Here's the dependable, lightweight lap roll the textile industry has been wanting.

Micarta research has produced it . . . in co-operation with Saco-Lowell Shops, world-renowned builder of textile machinery, and leading mills in New England and the South.

Extensive tests in actual applications have shown the Micarta Lap Roll to have these outstanding advantages:

1. **LIGHTWEIGHT.** Weighs 46% to 49% less than wood rolls. Elimination of this dead weight increases efficiency, boosts production 15% and more. Some mills are winding up to 3 lbs additional cotton on each lap. Workmen like the light weight of the empty rolls, are able to increase output. One mill found that a man can handle three machines instead of two . . . paid for Micarta Lap Rolls in a single year through resultant savings.

2. **RESISTS ABUSE** . . . won't chip or splinter . . . withstands the punishment of rough handling and increased loads. Maintenance is eliminated.

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For data and application help, consult your nearby Westinghouse office, or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna.

Ask for a copy of Bulletin B-4359, which tells how Micarta Lap Rolls were developed, tested, and the advantages and economy they will bring to your operations. J-06432

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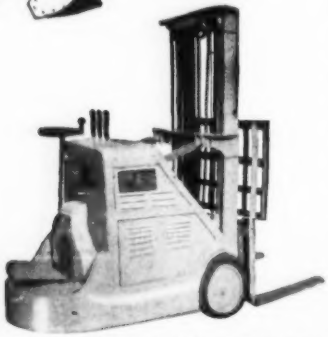

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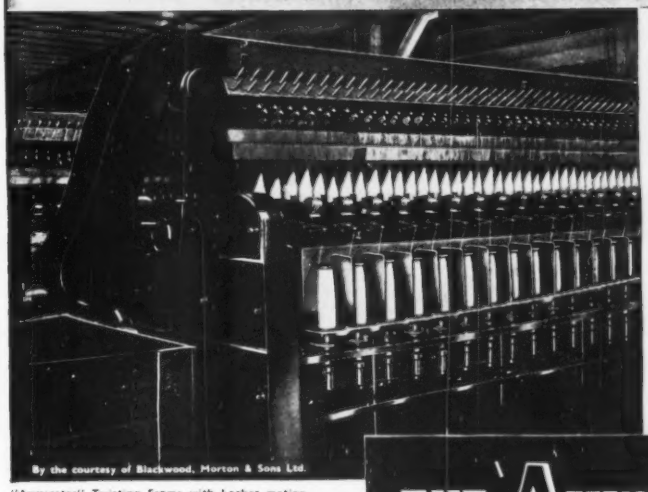

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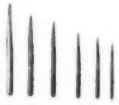

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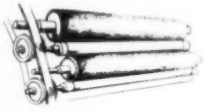

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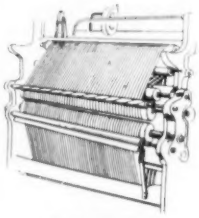

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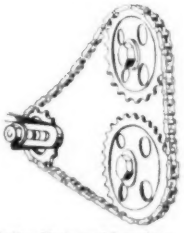

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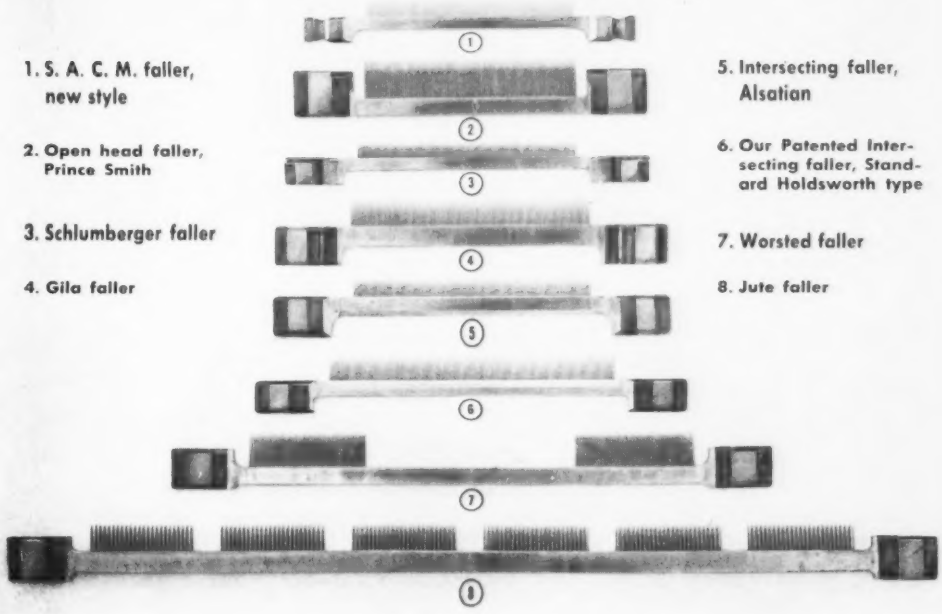

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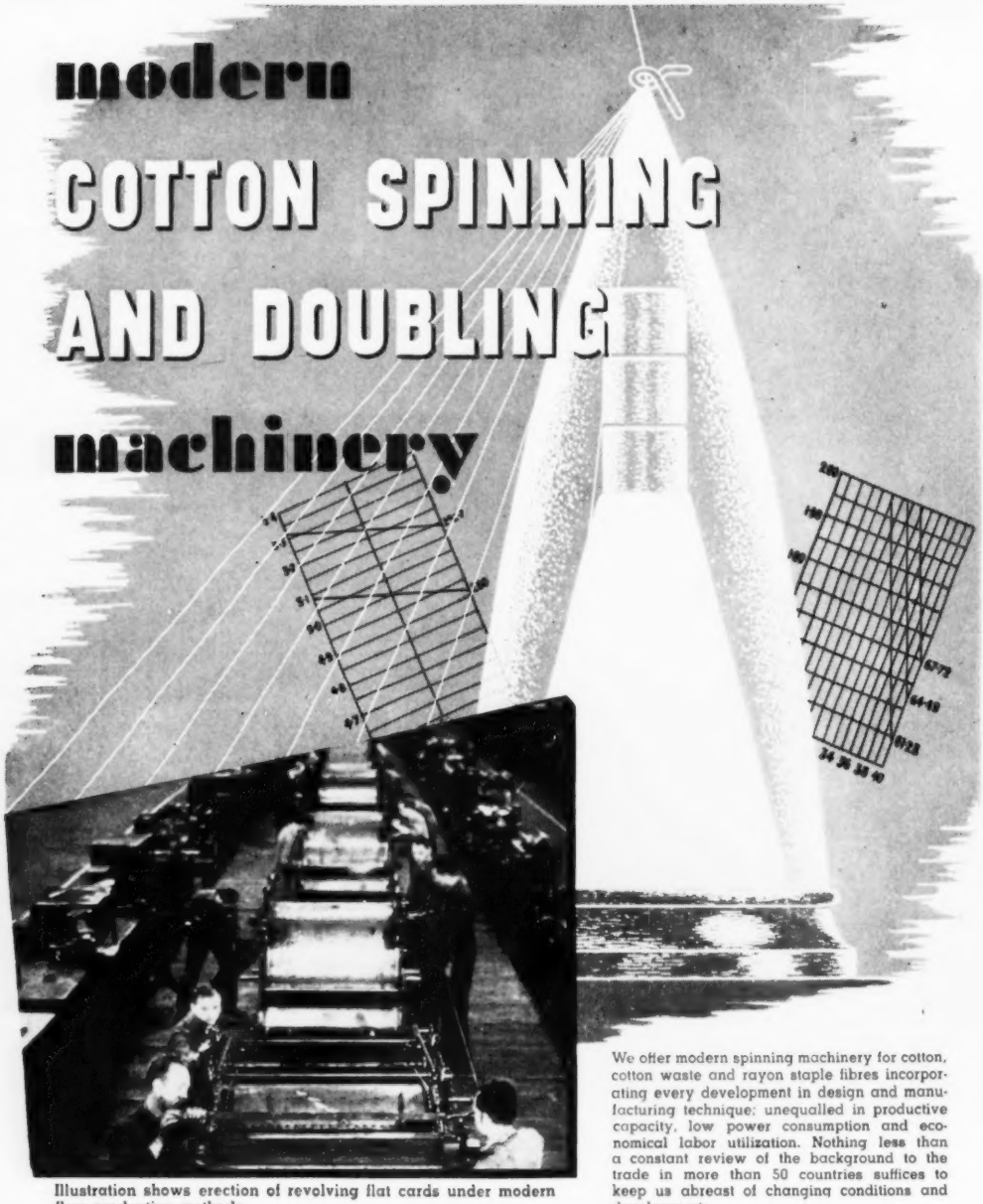

Illustration shows erection of revolving flat cards under modern flow production methods.

We offer modern spinning machinery for cotton, cotton waste and rayon staple fibres incorporating every development in design and manufacturing technique: unequalled in productive capacity, low power consumption and economical labor utilization. Nothing less than a constant review of the background to the trade in more than 50 countries suffices to keep us abreast of changing conditions and developments.

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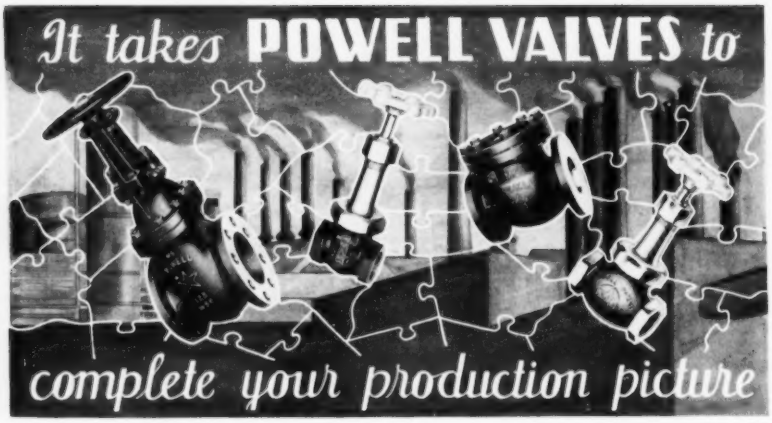

Everyone knows that in putting together a jig-saw puzzle picture it's simply a matter of putting the right piece in the right place.

In the case of flow control equipment the principle is the same. Because, only by installing the right valve—in design and material—to meet all the requirements of a specific service, can failures due to misapplication be eliminated.

Fortunately Powell *has been* applying this principle for more than a century. The result is a line of valves which is so complete that, for any set of flow control conditions encountered today, there's a Powell Valve that exactly fits all requirements.

So why not let Powell Engineers help you to complete your production picture by selecting valves that are specifically designed for your individual flow control services. Write us for details.

Fig. 500 — 125-pound Bronze Gate Valve with screwed ends, screwed-in bonnet, inside screw rising stem and tapered wedge, solid or double.

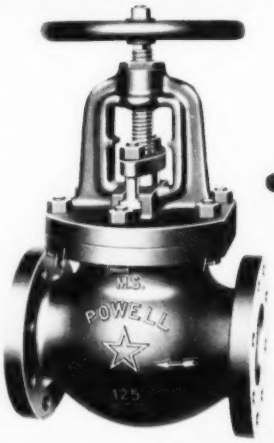

Fig. 241—Large 125-pound Iron Body Bronze Mounted Globe Valve. Made in sizes 2" to 16", inclusive. Has outside screw rising stem, bolted flanged yoke and regrindable, renewable bronze seat and disc. Also available in All Iron.

Fig. 1816—Large 125-pound All Iron Gate Valve. Made in sizes 2" to 30", incl. Has bolted flanged yoke, outside screw rising stem and tapered solid wedge. →

Fig. 150—150-pound Bronze Globe Valve with screwed ends, union bonnet and renewable composition disc.

Fig. 559—125-pound Iron Body Bronze Mounted Swing Check Valve with flanged ends, bolted flanged cap and regrindable, renewable bronze seat and disc.

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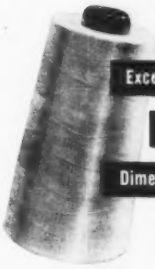

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When you want fabrics that *can take it* under adverse moisture conditions, Fiberglas yarns may be the answer. For Fiberglas is water-resistant and non-absorbent—won't mildew or rot—won't stretch or shrink—won't stain or water-spot.

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To cooperate with the technicians in your laboratory, Fiberglas maintains a Customer Service Laboratory and staff. They are at your disposal on a strictly confidential basis. For full information, ask Owens-Corning Fiberglas Corp., Textile Division, 16 E. 56th St., New York 22, N. Y. In Canada: Fiberglas Ltd., Toronto, Canada

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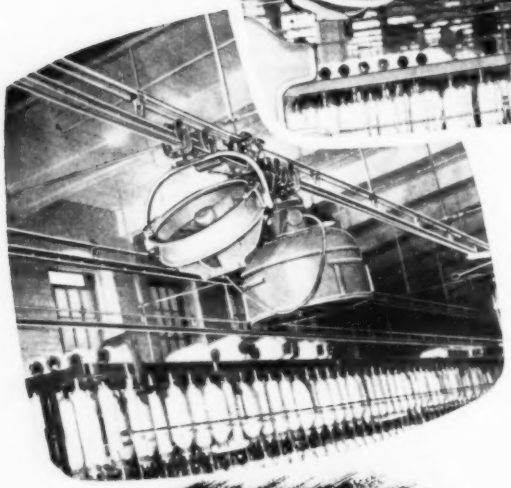
OWENS-CORNING FIBERGLAS *Yarns*

KEEP CEILINGS CLEAN

while cleaning frames!



A high velocity propeller-type fan unit travels at regular intervals around a loop of MonoRail track and sends a blast of air against the ceiling, preventing any accumulation of lint. The fan is easily adjusted for vertical or horizontal direction enabling air stream to reach every spot in the room.

At the same time, automatic cleaners passing over frames direct a swirling column of air down to prevent lint accumulations on machines.

An American MonoRail engineer will gladly explain the money-saving advantages of American MonoRail Automatic Cleaning. May we hear from you?

ADVANTAGES OF AMERICAN MONORAIL AUTOMATIC CLEANING

1 Removes lint before it accumulates.
2 Eliminates 95% of manual cleaning labor.
3 Machines operate full time.
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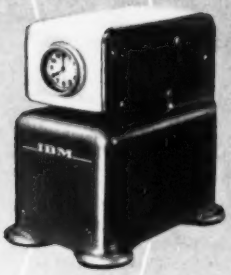

IBM Clocks, Time Recorders, Time Stamps, Signals—all are partners in providing uniform time and time records for your business.

When it is 8:00 on one clock in your building or plant, it is 8:00 on every clock, on every recorder, on every time stamp. And every signal rings on exact schedule, resulting in valuable coordination of effort.

This is accomplished WITHOUT SPECIAL CLOCK OR SIGNAL WIRING through the new IBM Electric Time System with Electronic Self-regulation. Utilizing existing AC wiring, a Master Control automatically supervises every time unit.

Call the nearest IBM office or contact us at the address below for more information on this IBM equipment—your "partners in time."

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Proof Machines • Electric Punched Card Accounting Machines and Service Bureau Facilities • Electric Typewriters

International Business Machines Corporation, World Headquarters Building, 590 Madison Avenue, New York 22, N. Y.

THE *New* HEAT SETTING MACHINE *for* NYLON*...

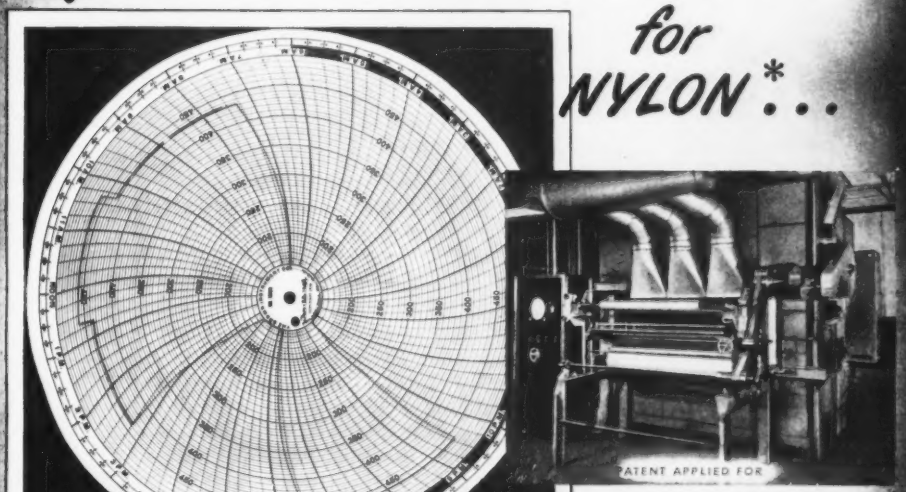

Photo above shows new Heat Setting Machine installed at the Fair Lawn Finishing Company.

limits temperature fluctuation to ±2°

Every textile engineer recognizes the vital relationship between heat and quality control in the finishing of Nylon fabrics. Confining the range of heat fluctuation to a mere ±2°, at the high temperature required for this process, may sound fantastic. The fact is, it can now be done successfully. The results obtained have been thoroughly proof-tested.

The graph shown above is a true photographic reproduction of the recorded temperature maintained while more than 20,000 yards of Nylon were processed. With this relatively constant application of heat, the improved characteristics imparted to the fabric, can be maintained on a relatively constant quality level, yard for yard.

**Also for Acetate, "Orlon" Acrylic Fiber, and similar products.*

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MORRISON MACHINE CO.

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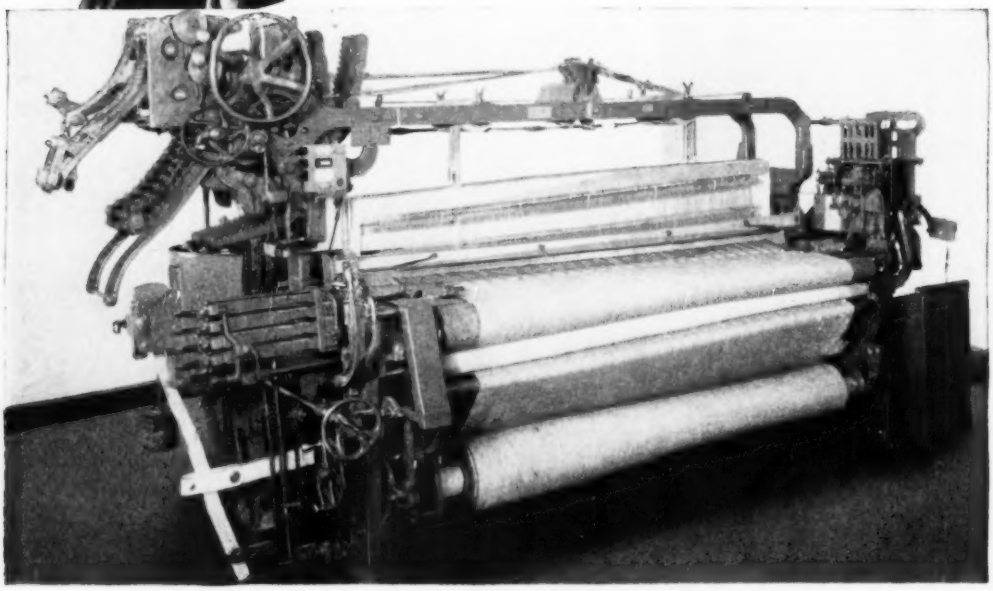
Now HIGHER-QUALITY FABRIC



from these NEW C&K W-3 ALL-PURPOSE LOOMS

More constant speeds . . . smoother, more vibration-free operation . . . these are your basic guarantees of higher-quality fabrics from the versatile new W-3 Looms.

And in addition, C&K further protects fabric-quality with these 3 features:

1. *New All-Purpose Take-Up* provides adequate but gentle tension. No steel surfacing or sandpaper to damage delicate warp or filling.

2. *Full Automatic Letoff* relieves the sudden strains of beat-up and shedding, while maintaining uniform tension on the warp, through the medium of the oscillating back roll. This results in minimum warp breakage, less mending, and higher quality of fabric.

3. *Automatic Filling Mixing* is available, when required, for those contrasting warp and filling jobs. Reed dents are longer, to let warp knots and nubs through more readily. And there are harness sectional cylinder gears for producing quality tropicals and high-sley goods.

These and other W-3 features contribute to better fabrics and higher production, at lower cost. Write for details and watch this page for further announcements on the *new C&K W-3 All-Purpose Loom.*

C&K — A Loom for Every Woven Fabric

CROMPTON & KNOWLES LOOM WORKS • Worcester 1, Mass.

PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA. • CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I.

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Woven Fabrics.

"HELP WANTED"

IS OUR SPECIALTY

MANUFACTURER WANTS ADHESIVE especially adapted to seaming textile-reinforced bag...composed of burlap outside, laminated crepe-kraft inside. Adhesive selected must have proven performance and economy.

Let *us* worry about your adhesive requirements.

We make a wide line of industrial adhesives . . . including non-inflammable SYNTEX*aqueous dispersions of rubbers and resins and latex compounds. Also asphalt emulsions, solvent cements and hot melt types.

For both wet and dry combining and bonding of a large variety of materials, chances are one of Flintkote's compounds will meet your needs.

If not, we'll call on our extensive research and development staff. These men make new problems their business . . ."help wanted" their specialty.

And they have an impressive record of successes behind them. Tire Cord Solutionings. Rug and Carpet Backings. Curled Hair Binder. Cloth and Leather Cements. Rubber to Metal Cements. Textile and Paper Laminants, Coatings, Saturants and Sizings. And a host of others.

Our entire research, development and manufacturing facilities are at your disposal. Whenever help is wanted, write us regarding your standard or special requirements.

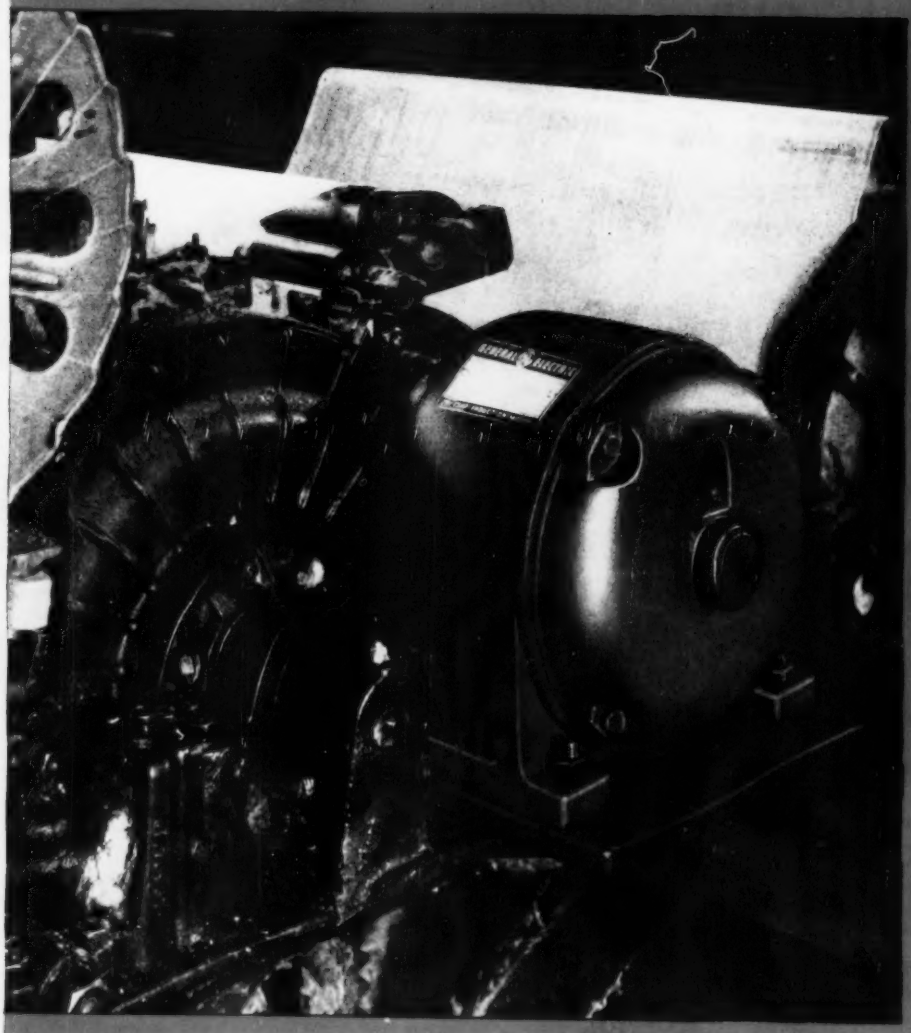
*TM REG. U. S. PAT. OFF.

THE FLINTKOTE COMPANY, *Industrial Products Division*, 30 Rockefeller Plaza, New York 20, N. Y.

FLINTKOTE

Products for Industry

built the way a



GENERAL ELECTRIC

loom likes it!

...that's why the new G-E loom motor increases output—costs less to maintain

The new G-E loom motor is backed by one of the most comprehensive development programs ever undertaken for a motor of this type. Loom design factors like weight of lay, travel of lay, picks per minute, weight of shuttle, etc., were carefully studied so that the electrical and mechanical characteristics of the new motor would meet the exacting demands of loom service. The result is a motor "built the way a loom likes it". In your mill it will produce these two important advantages:

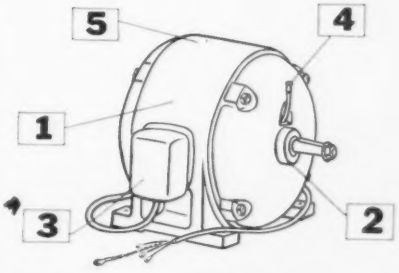
1. INCREASE YOUR PRODUCTION!

This new motor maintains a high sustained speed throughout the pick cycle. This contributes to maximum production from looms. Moreover, the rugged construction means little time out for repairs.

2. CUT YOUR MAINTENANCE COSTS!

The totally-enclosed cast-iron construction of this motor—plus new-type steel-backed bronze bearings enables it to withstand the rigors of loom service. Accessible oilers on large capacity bearing reservoirs simplify lubrication.

The new G-E loom motor (40° C rise) is now available in ¾, 1, 1½, and 2 horsepower ratings. Mail the coupon today for Bulletin GEA-5011 which gives detailed analysis of the motor, frame dimensions, etc. *Apparatus Department, General Electric Company, Schenectady 5, N. Y.*



THESE FEATURES MAKE G-E LOOM MOTORS A REAL BUY!

1. A rugged, totally enclosed, cast-iron frame which is shorter, takes up less aisle space.
2. Larger diameter, wool packed, steel-backed bronze bearing linings for greater capacity and longer life.
3. Roomy, two-piece conduit box will accommodate either S. O. cord, or conduit system (when suitable fittings are used). Motor furnished with 4 feet of 4-conduit Flamenol* cable.
4. A pinion-end bearing that's easier to lubricate.
5. All ratings with a single diameter frame to make it easy to change ratings as production demands vary.

TOTALLY ENCLOSED

LOOM MOTORS

Lint-free and cast-iron!

*Reg. U.S. Pat. Off.

General Electric Company, Section E661-32
Apparatus Department, Schenectady 5, N. Y.

Please send without obligation a copy of your Bulletin GEA-5011 which describes the new G-E totally-enclosed 40° C rise loom motor.

Name_____

Address_____

City_____ State_____

It is no accident that this company has 4 factories, 6 repair shops and 7 distributing points in strategic textile areas. It was planned from the beginning to make the best possible card clothing of all types, to make it readily available to all sections of the textile industry and to render a service which would promote the most efficient use of Ashworth Products.

In furtherance of this policy, we have recently built and placed in operation a new modern factory in Greenville, S. C. This step will assure better service for our northern customers as well as our southern customers, since it will relieve the pressure on our northern factories.

Ashworth service includes not only the manufacturing and delivery of the best in card clothing, but also card clothing surveys and recommendations. One of our practical card men will inspect your card clothing, bearings, chains, settings, etc., and, if necessary, recommend repairs and changes which will save you money or increase production.

This service is free. Ask us about it.

ASHWORTH BROS., INC.

AMERICAN CARD CLOTHING CO. (Woolen Div.)

FALL RIVER*†‡ WORCESTER*‡ PHILADELPHIA*†‡ ATLANTA†‡
GREENVILLE‡†* CHARLOTTE†‡ DALLAS†‡ (Textile Supply Co.)

**Factory* *†Repair Shop* *‡Distributing Point*

PRODUCTS AND SERVICES: Card Clothing for Cotton, Wool, Worsted, Silk Rayon and Asbestos Cards and for all types of Napping Machinery. Brusher Clothing and Card Clothing for Special Purposes. Lickerin Wire and Garnet Wire. Sole Distributors for Platt's Metallic Wire. Lickerins and Top Flats Reclothed.

Ashworth PIONEERS IN CARD CLOTHING

4 FACTORIES • • • 6 REPAIR SHOPS • • • 7 DISTRIBUTING POINTS

"Look, Boss! We're so *beautiful*—thanks to Swift's Soap!"
"You're not the only ones! All our fabrics look swell when we use Swift's Soap for scouring, dyeing and fulling."
"We hear Swift is one of the largest producers of soap materials. And they have the know-how to make soaps for *every* textile need."
"You're right! That's because Swift & Company's laboratories are among the best equipped in the world."

There's a Swift Distribution Point near you . . . to give you fast, efficient service. Call on Swift for

Swift's Soaps
for every textile use

Vertex Flakes
557 Flakes
White Ribbon Flakes
Wool Flakes

In barrels and bags

Swift & Company
Soap Department, Chicago 9, Illinois

You can always tell the Difference

—by the Tests of the Trades

The Taste Test

In the paper industry, one of the good old tests of the trade is the taste test. An experienced man can tell by his sensitive taste if the exact amount of sizing is being mixed with the pulp.

The Bird Test

Many a man is alive today because of a little bird. You know the story . . . and nobody knows it better than miners who have "watched the birdie" to determine whether air in the shaft was safe or dangerous.

The Egg Test To most people, two eggs can look like twins. But to the man whose business is eggs it's an entirely different story. For the good of his business . . . for the sake of his profits . . . he must and *does* test each egg to count his chicks before they're hatched.

The On-The-Wall Test

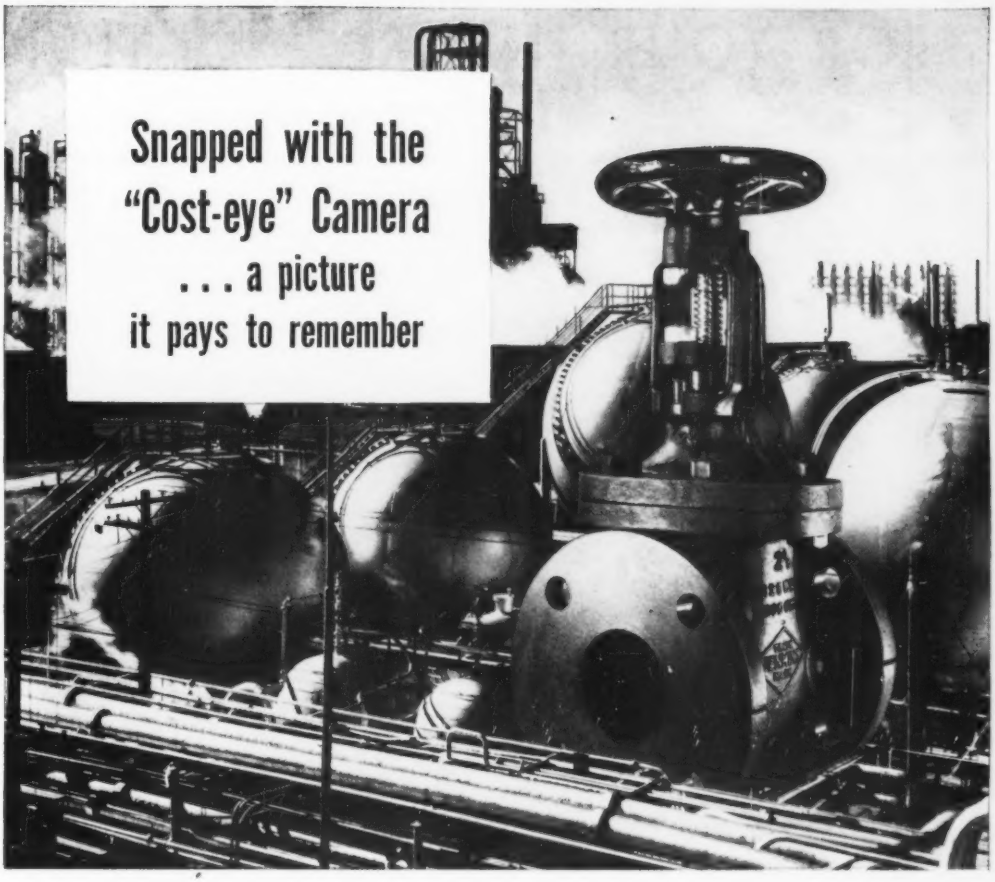
Before plunging into the expense of painting his plant a wise paint buyer determines his total costs and final results by the *on-the-wall* test. He *compares* different paints . . . by the amount they can be safely thinned; by the number of square feet each gallon covers; by the time and labor required to paint a given test area; by the number of coats it takes to do the job right.

Through that kind of sound testing, plant operators find *without fail* that *Barreled Sunlight does a better paint job for less money than any other paint on the market.* This is no hollow claim. It is a fact we can *prove.* Your nearest Barreled Sunlight representative will gladly do it by demonstration. Write and he'll call at your convenience.

U. S. GUTTA PERCHA PAINT CO., 20-D DUDLEY ST., PROVIDENCE, R. I.

Barreled Sunlight *Paints*

In whitest white or clean, clear, pleasing colors, there's a Barreled Sunlight Paint for every job



IF A CAMERA could be constructed with an eye to costs, this is the picture you'd get of a synthetic rubber plant. By showing *all valves* as *one valve* it brings into proper perspective the valve investment in *any* plant, *any* large building where operation involves fluid control. Collectively, valves represent a major expenditure . . . yet too often, they are selected with "petty cash" consideration.

IT WILL PAY MANAGEMENT to keep this picture in mind. With wages and material costs the highest ever, valve maintenance costs must be watched as carefully as operating expense of larger plant units.

EXCESSIVE MAINTENANCE of one inferior valve is insignificant, but multiplied by thousands, it is a serious drain on operating budgets.

JENKINS BROS. helps you meet this problem two ways. First, by building extra endurance into Jenkins Valves, making them the longest-lasting, lowest-upkeep valves that money can buy. Second, with advice from Jenkins Engineers on any question of proper selection, installation, inspection or maintenance.

For all new installations, for all replacements, rely on Jenkins quality and engineering for lowest valve costs in the long run. *Sold through leading Industrial Distributors everywhere.*

•

Jenkins Bros., 80 White St., New York 13; Bridgeport, Conn.; Atlanta; Boston; Philadelphia; Chicago; San Francisco.
Jenkins Bros., Ltd., Montreal.

"PREVENT VALVE FAILURE" is a 28 page guide to valve economy, fully illustrated, with case histories of valve damage, and recommendations for its prevention by proper selection, installation, inspection, and maintenance. FREE on request. Write: JENKINS BROS., 80 White St., New York 13, N. Y.

LOOK FOR THIS JENKINS DIAMOND MARK

SINCE 1864

JENKINS VALVES

Types, Sizes, Pressures, Metals for Every Need

FOR YOUR INFORMATION

You don't need new capital

SYTON can give you...

The *benefits* of plant expansion—with *no extra plant investment!*

SYTON increases the strength of yarns spun on the woolen or worsted system 10% to 30%. Mills profit from this increase in many different ways:

- Many mills reduce twist, hence boost production.
- Others report fewer ends down during spinning and weaving... which also means more production.
- Still others find they can spin blends hitherto impossible.
- Almost all report they can spin any given stock to a finer count.

Hundreds of woolen and worsted spinners... more every day... are proving that Syton is a practical production speeder... a money maker for mill management.

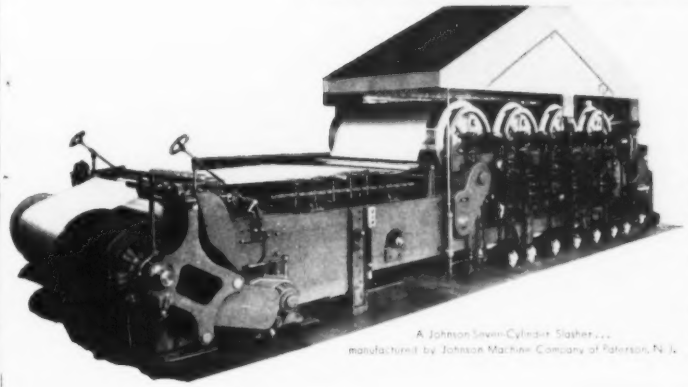
Why not find out today how much Syton can mean to your mill? Our technical staff stands ready to help. Just send the handy coupon on the right.

Syton, Stylon, Reziard Reg. U.S. Pat. Off.

MONSANTO
CHEMICALS—PLASTICS

SERVING INDUSTRY
WHICH SERVES MANKIND

STYMER acetate size eliminates GEL problem



A Johnson Seven-Cylinder Slasher... manufactured by Johnson Machine Company of Paterson, N. J.

Enthusiastic mill owners everywhere report that Stymer can be left in size-boxes overnight... that it does not "set" when cold, causing lines to clog. It eliminates messy clean-up jobs... saves both time and materials.

Stymer is a new "man-made" sizing agent whose uniformity and quality are strictly controlled. In addition to its non-gelling properties, Stymer:

Increases weaving efficiency.

Gives warp a superior finish over a wide range of humidities and temperatures.

Reduces static electricity.

Is non-gumming, non-thickening, non-mildewing; will not set or sour.

Minimizes dirty knot problems. Stymer's detergent power removes dirt picked up by knots.

Forms abrasive-resistant film without undue stiffening.

Is easy to dissolve from the woven fabric in warm water containing a mild detergent.

To get full information on how you can increase slasher production, improve weave room efficiency, cut costs with Stymer, clip the handy coupon below.

N.Y. Board Approves REZGARD as Flame Retardant

Monsanto's new textile chemical, Rezgard A, meets all the requirements of the New York Board of Standards and Appeals as flame retardant for cellulosic fabrics. Flame tests made under the direction of the Board prove Rezgard protected fabrics will not flame, flash or glow outside of the char area.

Moreover, Rezgard gives fabrics soft, dry, non-dusting finishes. It does not change the appearance and hand characteristics of the fabric. It is low in cost, easy to apply, and has outstanding non-yellowing and aging properties.

Check the coupon at right for full information on this "approved" textile flame retardant for cellulosic fabrics—Rezgard A.

MONSANTO CHEMICAL COMPANY, Textile Chemicals Department
Desk TWT16, 140 Federal Street, Boston 10, Mass.

Please send me information on Syton, Stymer, Rezgard.

Name Title

Company

Address

City Zone State

US SPECIALISTS

. . . take care of your special needs

U S representatives make the answer to your problems our immediate concern. They place at your command the knowledge and experience of our staff of designers and production engineers. They make available to you our wide resources — U S controlled all the way — from tracts of virgin hardwood timber holdings, through modern manufacturing processes, to prompt delivery of the finished product to you.

These are the U S men and the U S policy of interested cooperation that link our design and production service closely with your requirements. You'll find U S right in step with every advance in efficient mill equipment. As a result, the latest developments are again and again first available from U S. Good reasons, these, why it will pay you to consult U S every time on any question involving Bobbins, Cones, Rolls, Shuttles, Spools, Tubes, or other equipment.

Controlled Raw Materials: Extensive U S owned timber properties allow close control of raw material selection and processing from the source.

Ample Plant Capacity: Three manufacturing plants in North and South Locations closely keyed to textile production areas, are fully equipped to handle any size orders.

Precision Standards: U S has cooperated with textile machinery manufacturers for nearly a century — and can meet the closest possible tolerances for dimension, weight and balance.

Mill-Wise Representatives: U S representatives cover every field of textile production, and can offer thoroughly experienced advice on the use of U S products in any process.

US BOBBIN & SHUTTLE CO.

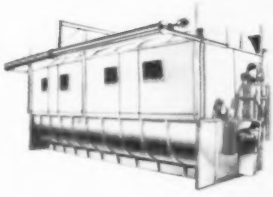
PROVIDENCE, R. I. — **LAWRENCE, MASS.** — JOHNSON CITY, TENN.
GREENVILLE, S. C. — PHILADELPHIA, PA. — CHARLOTTE, N. C.

CHICAGO REPRESENTATIVE: Albert R Breen, 80 E. Jackson Blvd.
CANADIAN REPRESENTATIVE: W. J. Westaway, Montreal, Que. — Hamilton, Ont.
ALABAMA REPRESENTATIVE: Young & Van Supply Co., Birmingham

One of a series painted for Rodney Hunt by Ben Stephenson

FAMOUS FINISHES . . *The 6-metre boat "Goose" crosses the finish line less than one minute ahead of her competitor, the Swedish "Maybe VI," to win the 1948 Gold Cup series, held in September off Oyster Bay, Long Island. This marked the fourth time in ten years that the "Goose" captured the coveted Gold Cup.*

VERNEY is famous for its "finishes," too! The Verney Corporation's Finishing Division has long been outstanding for the fine finishes of its dress and menswear fabrics. Helping them keep ahead in quality and costs has been the exclusive use of modern Rodney Hunt "Tru-Shade" Dye Becks with their unique patented "Curve-of-Strength" construction. Wherever you find "famous finishes" in textiles, you're apt to find the famous finishing equipment of "Rodney Hunt." You are invited to turn the page for more specific information about "Finishing For Profit."



RODNEY HUNT

RODNEY HUNT

Established 1840

ORANGE 10, MASSACHUSETTS, U. S. A.

"Tensitrol," "Tru Shade," "Slack Loop," "Wring Master," and "Curve-of-Strength" are registered trademarks identifying textile finishing machinery manufactured exclusively by Rodney Hunt Machine Co.

Finishing For Profit

RODNEY HUNT

Established 1840

RODNEY HUNT MACHINE CO.

ORANGE 10, MASSACHUSETTS, U.S.A.

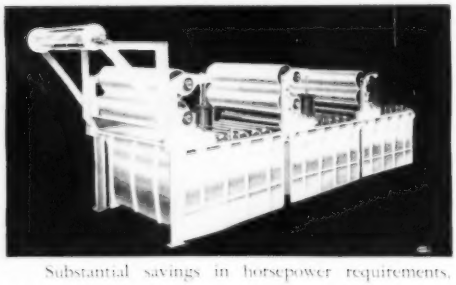
Trouble-Free "Tensitrol" Washers
Synchronized with Dryers on Rayons

"TENSITROL" Open Width Washers operating on all types of rayon fabrics have proved so trouble-free that they have been *synchronized with the dryers* at one of the world's largest rayon manufacturing and finishing plants.

Other "Tensitrol" Washers at the plant are also operating on open width rayons at *speeds in excess of 100 yards a minute*, compared to the previous maximum speed of 60 yards a minute.

Completely tensionless operation—obtained with no change in speed of any moving part of the "Tensitrol" Washers—made that 66⅔% production increase possible. Damage to the most delicate of rayons, from pulling and hauling under previous methods of washing, was ended in the "Tensitrol" Washer because the fabrics were free to shrink or stretch at any point in the machine.

Tangles are similarly unknown. Time lost under previous makeshift methods, aimed at continuous processing, has been eliminated.

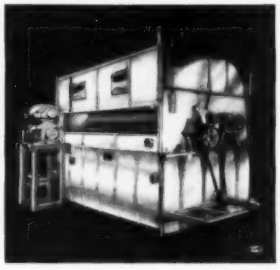


Substantial savings in horsepower requirements, floor space, and water consumption have all been noted by officials at the rayon plant. The proved efficiency of "Tensitrol" Open Width Washers is now available to finishing plants everywhere.

* * *

Most Versatile Machine in Wet Finishing Plants

"SLACK LOOP" machines, made exclusively by Rodney Hunt, will be found in finishing plants throughout the world, being used for: Bleach washing of sheetings at 150 yards a minute; washing lace curtains free of graphite; rope soaping cotton prints at 150 yards a minute; continuous tinting and sizing of curtains at high speed; continuous washing of lace dress fabrics; rope soaping rayon prints without mark-off; high speed processing of terry toweling without distortion; scouring and caustic boiling.

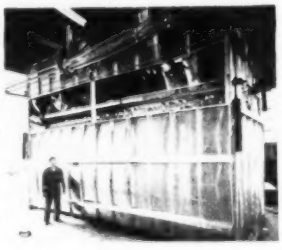


Not only are "Slack Loop" machines the most versatile, but are the highest speed of their type. At speeds up to 150 yards a minute, they operate with unmatched efficiency in any of the operations listed above and cause fewer stoppages caused by tangles or tight strands.

* * *

World's Largest Dyeing Machine

THE twenty-foot Rodney Hunt "Tru-Shade" Dyeing Machine pictured here is the world's largest and is now in operation on wool blends.



The patented "Curve-of-Strength" stainless steel tub easily withstands the pressure of nearly thirty tons of dye liquor without flexing. The tub itself is seven feet deep and the dyeing machine as a unit, with its fully enclosed top, stands sixteen feet in the air.

While the "Curve-of-Strength" makes it possible to build tubs of this size or of even greater dimensions, the patented "pipe body" construction of the twenty-foot reel permits great weights of fabric to be carried without sign of twisting or distortion.

"Tru-Shade" Dye Kettles and Dye Becks are readily available in a large range of sizes in stainless steel, with equipment to fit any need.

* * *

If further information is desired on the above subjects, please address your inquiries to the Rodney Hunt Machine Co., Orange 10, Massachusetts, U.S.A.

Learn these Definitions

rayon

A textile fiber made of *regenerated cellulose.* (Example: viscose.)

estron

A textile fiber made of an *ester of cellulose.* (Example: cellulose acetate.)

● These separate and distinct names for the two major types of man-made fibers are recommended by the Committee on Textiles of the American Society for Testing Materials, the membership of which includes many leading manufacturers, distributors, and users of textile products.

Tennessee Eastman will follow the ASTM recommendation and identify its cellulose acetate fibers as *estron*, not rayon.

Tennessee
Eastman
Corporation

SUBSIDIARY OF EASTMAN KODAK COMPANY

KINGSPORT, TENNESSEE

FEEL their sense of pride? Tuffer card clothing is a joy to put on. Its specially constructed cylinder cloth hugs the cylinder and holds the points in perfect alignment.

Soon these cylinders will begin to roll . . . opening up, separating, and paralleling the individual fibres . . . improving the operation of subsequent manufacturing steps.

Call in a Tuffer man—let him help you get the right start toward better quality and higher operating efficiency.

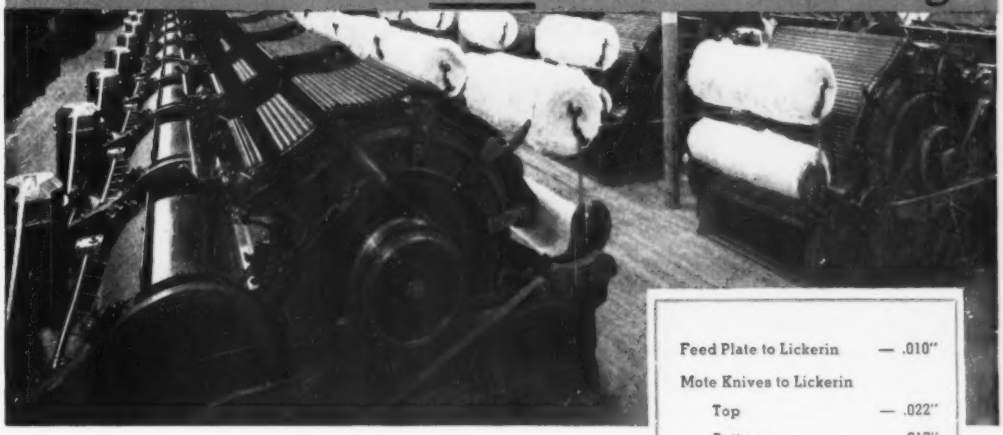
HOWARD BROS. MFG. CO. WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C.

Branches: Philadelphia, Pa. and Blanco, Texas Direct Representation in Canada A-6

TUFFER CARD CLOTHING **IMPROVES PRODUCTION ALL ALONG THE LINE**

Will Your Cards *Run* to These Settings?



Feed Plate to Lickerin	— .010"
Mote Knives to Lickerin	
Top	— .022"
Bottom	— .017"
Screen to Lickerin	— .029"
Lickerin to Cylinder	— .007"
Flats to Cylinder	— .010"
Doffer to Cylinder	— .007"
Doffer Comb to Doffer	— .022"

SETTING a stationary card to these, or to your own standards, is one thing . . . **RUNNING** a card with these settings is something else.

- *Lickerins and cylinders cannot run true in worn bearings.*
- *Close settings, which mean good work, cannot be maintained with worn bearings.*
- *Cylinders cannot be properly ground when running in worn bearings.*
- *Close settings cannot be gauged at lickerin screens caked with grease and lint.*
- *Chattering combs cannot run closely and smoothly to the doffer.*

Southern States Ball and Roller Bearing Units on your cards make "Running to Gauge" possible — because the **SKF** bearings provide rigidity resulting in settings remaining the same whether the card is running or stationary.

Southern States Ball and Roller Bearing Units mean: an end to oil problems . . . oil-soaked clothing . . . caked screens . . . an end to dirty flats . . . excessive wear . . . shorter grinding time . . . simplified lubrication.

Install Southern States units at

LICKERIN • CYLINDER • COMB BOX
COMB STOCK OFF END

Southern States Equipment Corp.

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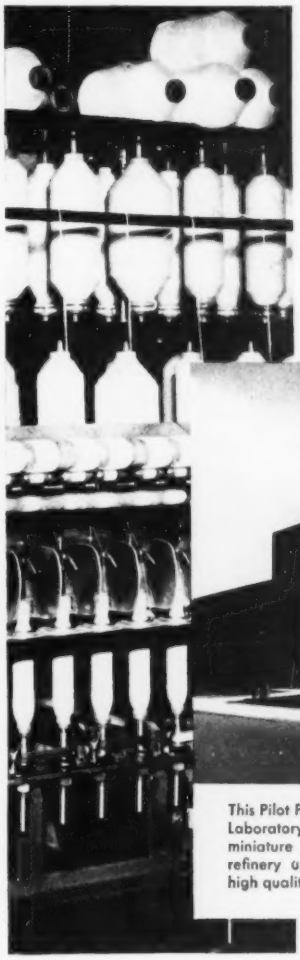
Largest Manufacturer of Cast-Tooth and Cut-Tooth Gears in the South

SINCLAIR LILY
Reduce Bolster Wear

SINCLAIR

YOUR NEAREST SINCLAIR AGENT WILL GLADLY ARRANGE

WHITE OILS Up To Two-Thirds



In a textile mill, wear of bolsters on the spinning frame allows spindles to wobble and causes uneven draft . . . which affects the perfection of the yarn. Replacements of worn bolsters add to production costs.

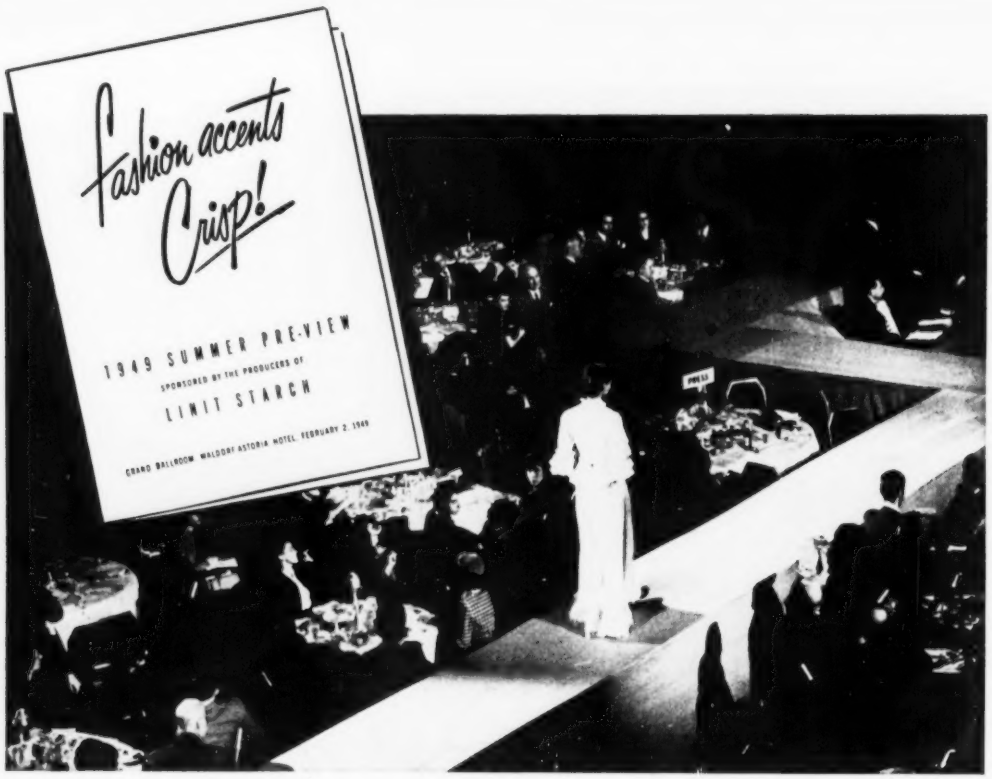
When Sinclair LILY WHITE OIL AX, BX or CX is the lubricant, bolster wear is greatly diminished. Mill records show that LILY WHITE OILS, improved and specially compounded, reduce bolster wear as much as TWO-THIRDS . . . resulting in fewer bolster replacements, greater perfection of products and lower cost of production.

This Pilot Plant, part of the great Sinclair Research Laboratory at Harvey, Ill., provides space for six miniature operating replicas of commercial-sized refinery units. Continuous research explains the high quality of LILY WHITE and other Sinclair Oils.

Making a study of crystal structure of catalysts, this Sinclair researcher at Harvey uses physical chemistry to develop refinery techniques in a never ending effort to bring industry better petroleum products at lower costs.

TEXTILE LUBRICANTS

FOR LUBRICATION COUNSEL, OR YOU MAY WRITE TO SINCLAIR REFINING COMPANY, 630 FIFTH AVE., NEW YORK 20, N. Y.


Fashion accents Crisp!
1949 SUMMER PRE-VIEW
SPONSORED BY THE PRODUCERS OF
LINIT STARCH
GRAND BALLROOM WALDORF-ASTORIA HOTEL FEBRUARY 2, 1949

The Crisp Look
continues making cotton promotion history!

"The crisp look of Starched Cottons"—launched on the stage of the Waldorf-Astoria's grand ballroom, February second . . .

Has leapt to the forefront of fashion trends on the air, in television, in the newsreels, in the nation's press.

Is already acknowledged editorially in leading women's magazines, in department store and dress-manufacturer advertising and promotion.

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Is headlined every month in the LINIT* Starch 16-magazine, 34-million circulation . . . full-color . . . campaign.

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*LINIT is a registered trade-mark of Corn Products Refining Company, N. Y.

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Corn Products Sales Co.

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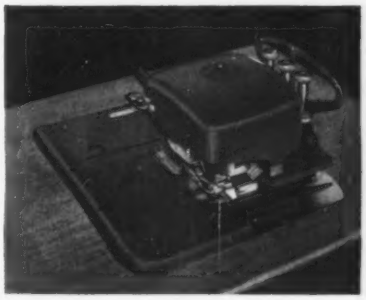
W & G "Superlock"*

for Super-Speed Overseaming

at LOWEST OVER-ALL COST

The vibration-free "Superlock" can be mounted semi-depressed, as shown above—flush with the table top, as shown below—or on top of the table, whichever is more convenient for the type of work being handled.



The W & G "Superlock" is one of the fastest machines ever developed, for overseaming, hemming, edging, and serging. But high speed is only one of its many advantages. It's easier to operate—easier to thread and adjust—and is designed and built throughout to stay on the job year after year, with minimum attention and lower maintenance costs.

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The "Superlock" is adaptable for 2-thread Stitch Types 502 and 503, and for 3-thread Stitch Types 504 and 505. Available in 52 different organizations, to meet your precise requirements for virtually every overseaming, hemming, edging or serging operation.

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Unusual simplicity of design makes all working parts readily accessible. Threading, cleaning, and inspection is an easy matter, saving both the operator's and the mechanic's time. This means lower costs for you.

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. . . and you share the honors and benefits

In celebrating Victor's Golden Anniversary, we are fully aware that no firm could thrive and prosper for so long without the continued patronage and good will of thousands of customers and friends in the textile industry.

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So we invite you to share the honors and the *benefits*, of our 50 years in business. Look to Victor for leadership in traveler development, in the future, as in the past. Write, wire, or phone for prompt service.

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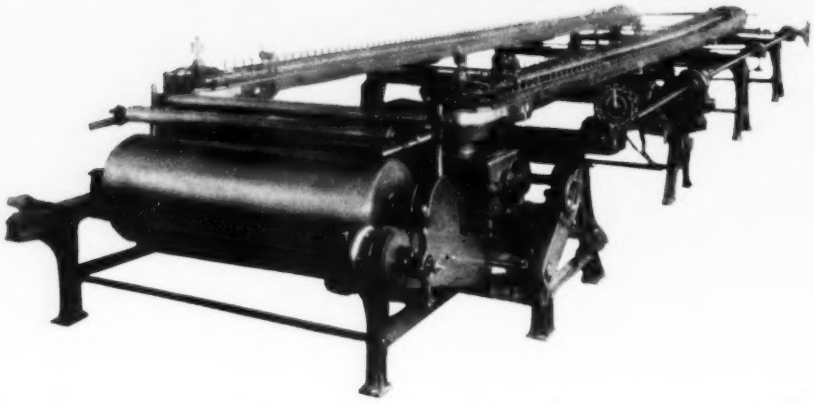


Main Drive through our own improved heavy duty enclosed Reduction Unit with hardened alloy steel bevel gears and spiral gears mounted on heavy duty Timken tapered roller bearings totally enclosed and running in an oil bath.

The Reeves Variable Speed Transmission is driven from the motor through "V" belts and a silent chain drive is provided to the center of the main shaft to distribute load evenly on both sides of the frame and assuring even width. This feature adding years of trouble-free service.

A Motor-driven Power Opener to open and close the clip frame.

A Width Indicator in plain view to show width of goods at the delivery end.

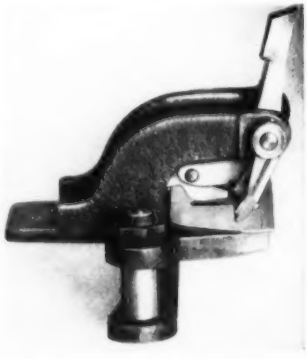
Automatic Adjusting Clip Chains.

Clips—Right and Left Hand with driving portion of each clip made to contour of clip driving sprocket.

Controllers Chrome Plated mounted in clip gate. Will handle all types of cloth at present day speed. Knife made of stainless steel. Above parts mounted integral with gate.

Clip Connecting Pins hardened alloy steel non-turning with covered self-contained oil reservoir. Clip pin is threaded on top and held in place by Hexagon Self-Locking Nut. Pins are removable and can be reused any number of times.

Clip Bushings hardened alloy steel non-turning.



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THE HINNEKENS MACHINE CO., Inc.

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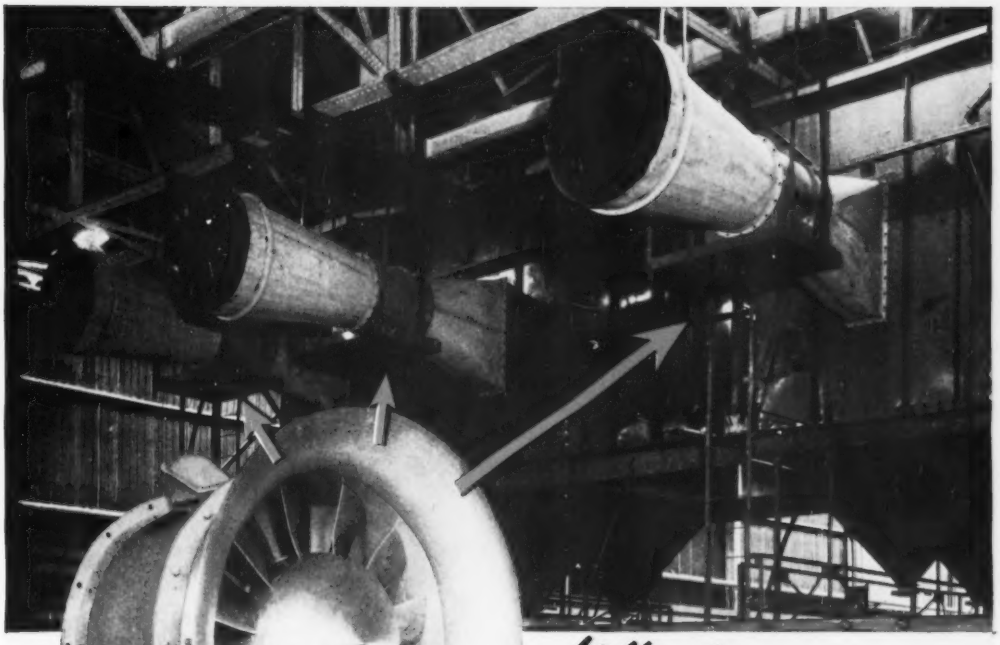

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WILL DO IT MORE EFFICIENTLY AND MORE ECONOMICALLY!

Write for Bulletin, or *Consult a Joy Engineer*

From every possible angle, JOY Series 1000 AXIVANE Fans will give you a better, lower-cost job. Their inline, vane-axial design is lighter and more compact; and they operate more quietly, require less power and space, and save greatly on installation time and costs. What's more, you get the extra flexibility of adjustable blades—an *exclusive* JOY feature—permitting easy and quick on-the-job regulation of pressure or volume over a wide operating range, with positive protection against motor over-load. ● Whatever your job is, JOY AXIVANE Fans can show you advantages—let us work with you.

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NOPCO FUA *eliminates the need for all soaps and detergents* in fulling and scouring. It also stops static completely during carding. It does not rust or corrode. NOPCO FUA is anhydrous, all fatty, contains no mineral oil or hydrocarbons—is salt free and ash free.

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Bull Dog Industrial V-Belts are available in A, B, C, D and E sections, full range of lengths
Fractional Horsepower FHP V-Belts are available in three standard sections, full range of lengths

LESS SLIPPAGE! COOLER RUNNING! LONGER LASTING!

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RUGGED BULL DOG V-BELTS

On tough jobs where a dependable V-Belt drive is of utmost importance, operators today are specifying Bull Dog V-Belts.

These new BWH "titans" have consistently proved they deliver the kind of steady, trouble-free service that speeds production and slashes maintenance costs.

Here's why there's less slippage with Bull Dog V-Belts, fewer shutdowns for adjustments, greater long-term economy in their use:

1. *Exclusive Bull Dog Cord Section Has Higher Tensile Strength*, able to carry the load and absorb shock.

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Bull Dog V-Belts are one of many famous products manufactured by BWH. When you need industrial rubber goods, look to BWH for products of dependable ruggedness, to BWH distributors for dependable service.

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Bring us your toughest problems. We're specialists in solving them. Consult your nearby BWH distributor or write us direct.

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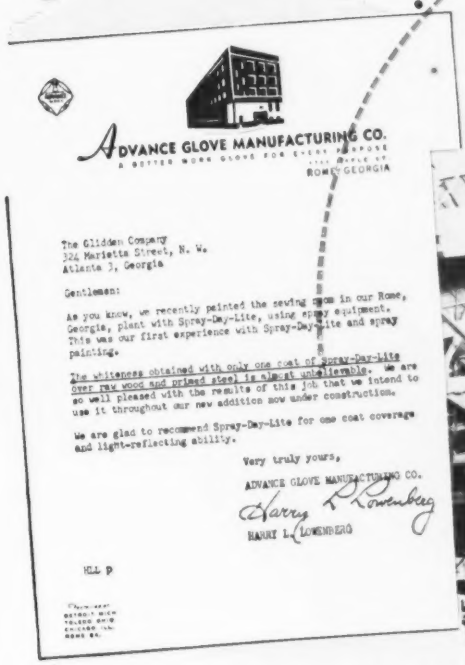
ONE COAT RESULTS "almost unbelievable..." with Glidden

SPRAY-DAY-LITE



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A BETTER WORK GLOVE FOR EVERY PURPOSE
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As you know, we recently painted the sewing room in our Rome, Georgia, plant with Spray-Day-Lite, using spray equipment. This was our first experience with Spray-Day-Lite and spray painting.

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We are glad to recommend Spray-Day-Lite for one coat coverage and light-reflecting ability.

Very truly yours,
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Size preparation, size pick-up and drying affect ultimate results . . . determine weave room efficiency.

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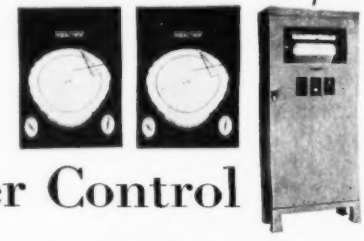
with

Brown Complete Slasher Control



BROWN *Advanced Instrumentation* FOR THE TEXTILE INDUSTRY

Product of MINNEAPOLIS Honeywell

A minor detail —a major matter

The angle of the butt on a spring beard needle has a definite bearing on the quality of sheer hosiery. For the angle of the butt determines how well the needle sets in the bar and keeps its alignment. Uniformity of dimensions, temper, strength and smooth finish are essential in every needle, particularly at this point.

Torrington assures these qualities by applying advanced precision methods of manufacture and control. It is one of the reasons why you can depend on Torringtons to do smoother, finer knitting. Insist on Torrington Needles.

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Established 1866

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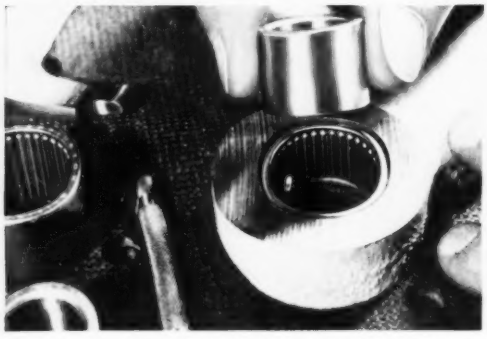
Torrington Needle Bearings increase

Precision and Speed

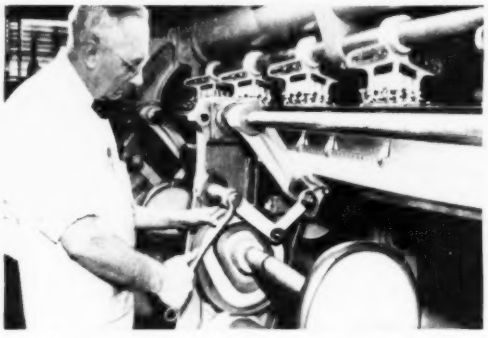
of Kidde Knitters

Precise action of Raschel-Type Warp-Knitting Machines made by Kidde Manufacturing Company begins with a design using 18 Torrington Needle Bearings. In the litter bar assembly, 4 Needle Bearings assure close tolerances with less machining of related parts.

Needle Bearings not only simplify fabrication, but are also less expensive to install. The self-contained units are easily pressed into place with an arbor press. The design of the assembly is simplified since the bearings need no retaining devices.



Close-up of capacity and precision! Torrington Needle Bearings and Cam Followers handle rotating and oscillating motion very efficiently, thanks to the large area of roller contact surface, precision inner races and effective lubrication.

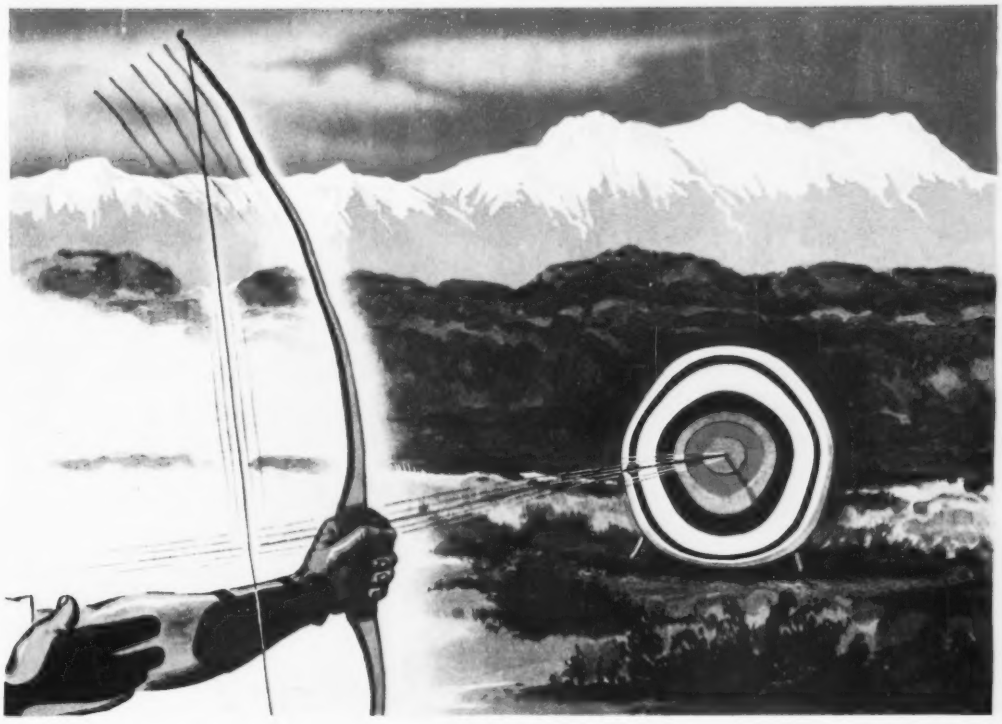


Litter bar assembly, being installed above, activates the needle bar for speeds of 100 to 400 courses a minute. In this and the other applications to Kidde Knitters, Needle Bearings reduce friction and help maintain accuracy of knitting action.

In equipment you build or operate, Torrington Needle Bearings can pay their own way . . . in fabricating and assembly savings . . . in high operating efficiency. Our engineers will gladly work with you to adapt them to your requirements. Write us today. The Torrington Company, Torrington, Conn. or South Bend 21, Ind. District offices and distributors in principal cities.

TORRINGTON *NEEDLE* **BEARINGS**

Needle • Spherical Roller • Tapered Roller Straight Roller • Ball • Needle Rollers



FLEXIBILITY SCORES

It's the flexibility and resilience of the bow that sends the arrow straight to the mark, and gives you a bull's eye.

And it's flexibility in a de-sizing agent that makes a difficult finishing job easy. That's the reason bleachers and dyers chalk up a high score for Diastafor brand de-sizing agent—Type L.

The variables that are present with almost every lot of goods coming to your mill bring problems to the men in charge of finishing operations that demand the utmost in skill and equipment.

In dealing with these variables they know the special value of an all-purpose de-sizing agent like Diastafor—Type L, which works well under so many different conditions.

Diastafor—Type L helps you score a bull's eye, even on your hardest lots, because of its workability in a wide range of temperatures. It will give good results in a wide pH range as well.

Diastafor is easy to use, it's economical, it's dependable. It will give you a fine "hand" whether you are working with cottons, rayons or mixed goods. It is kind to your fabrics, too. Tensile strength is never impaired. Diastafor gives you the finish you need for even dyeing, with no streaks or blemishes. It works well in the continuous process.

Our sales and technical staffs are always glad to give special assistance on de-sizing problems when their services can be helpful. Write Standard Brands Incorporated, *Diastafor Department*, 595 Madison Avenue, New York 22, New York.

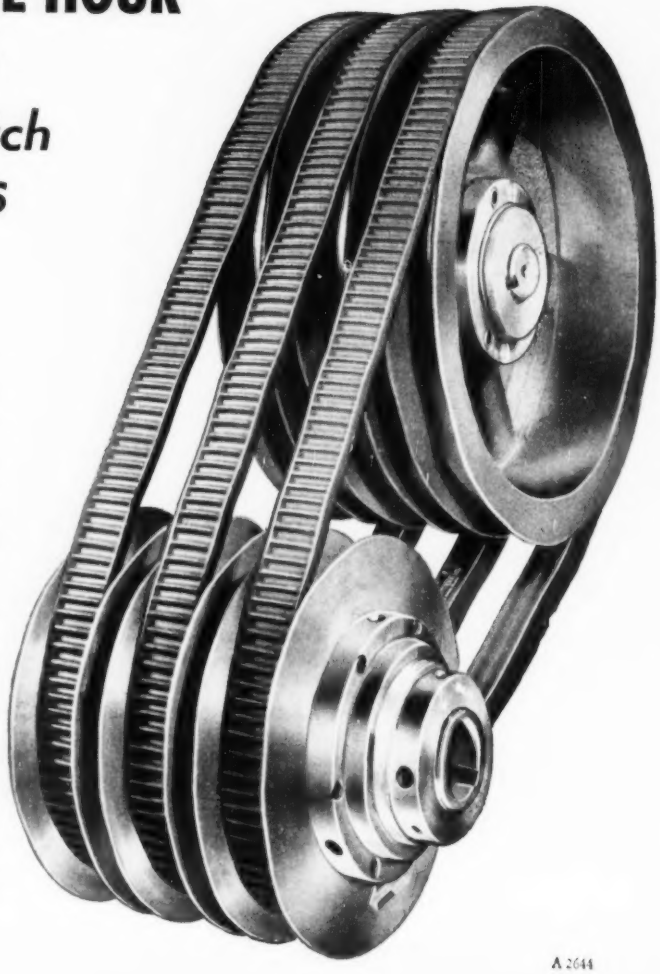
DIASTAFOR

A TRADE MARK OF STANDARD BRANDS INCORPORATED

3 Ways to Cut

1. PRODUCE MORE PER MACHINE HOUR

with Vari-Pitch Drives



QUICK EASY SPEED CHANGES and accurate speed control will give you more production, reduce your unit costs. The simplest method of speed control is Vari-Pitch Drive. Simple, rugged, clean, quiet -- these drives give you the speed control you need at lower cost than any other way. Three types cover all applications.

STATIONARY CONTROL — Most widely used and lowest cost speed control. Change speeds in 5 to 8 minutes. Speed range of 50% to 100%.

MOTION CONTROL — Changes speed instantly *while machine is running*. Same 50% to 100% speed range. Greatest saving where speed changes are frequent.

SPEED CHANGERS — Fully enclosed multiple V-belt drive with special sheaves giving 375% speed range. Single handwheel adjusts *while running*.

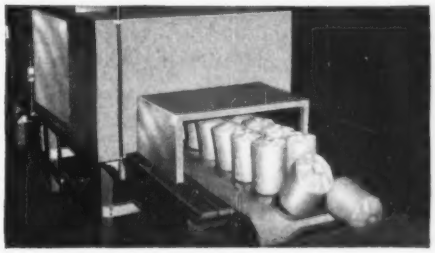
You can figure the saving in dollars and cents with the help of your Allis-Chalmers Authorized Dealer or District Office representative. He will help you analyze your operations and show you time and cost savings in your own production setup. Consult an Allis-Chalmers drive expert today. Also listed in Sweet's.

A 2644

Texrope, *Vari-Pitch* and *Quick Clean* are Allis-Chalmers trademarks.

Costs FOR TEXTILE MEN!

2. SPEED HEATING AND DRYING *with Allis-Chalmers Dielectric Heaters*



DIELECTRIC HEATING has resulted in outstanding production records in many textile mills. Its chief advantages are: Increased speed, which smooths out production sequences and reduces stock in process. . . . Close heat control, which improves product quality greatly. . . . Even heating throughout, which improves product uniformity. *Allis-Chalmers Dielectric Heaters produce results that cannot be duplicated by any other process.*

Typical Examples: Drying reduced from days to minutes. Shrinkage variation below 0.4%. Twist set in minutes with definite improvement in tensile strength.

Go over your production methods with an Allis-Chalmers dielectric heating expert. He can tell you if your operations can be improved by this new method. He will show you cost figures based on your operations. You can't afford to miss this opportunity. Contact your A-C District Office or write direct today.

3. REDUCE MAINTENANCE COST *with Allis-Chalmers Textile Motors*

QUICK-CLEAN MOTORS

Less down-time for cleaning because large fans produce a greater volume of air and keep lint moving through unrestricted air passages. There is no place for dirt to lodge. Bearings are sealed — they may be operated five years without attention. Grease does not leak out. Available from 2 HP at 1200 rpm to 15 HP at 1800 rpm. Some in stock, others on quick delivery.

LOOM MOTORS

Totally enclosed, non-ventilated type. They have all of the operating characteristics required for efficient loom drive: high maximum torque . . . smooth power under rapidly changing load . . . extra overload capacity for breaking-in operation.

In addition, these motors have construction features necessary for long life and minimum maintenance. Anti-friction bearings . . . die-cast rotor, accurately turned and balanced . . . "Formvar" copper wound stator, twice dipped in insulating varnish and oven-dried.

Immediate delivery on ¾ and 1 horsepower ratings.

ALLIS-CHALMERS, 1056A SO. 70 ST.
MILWAUKEE, WIS.

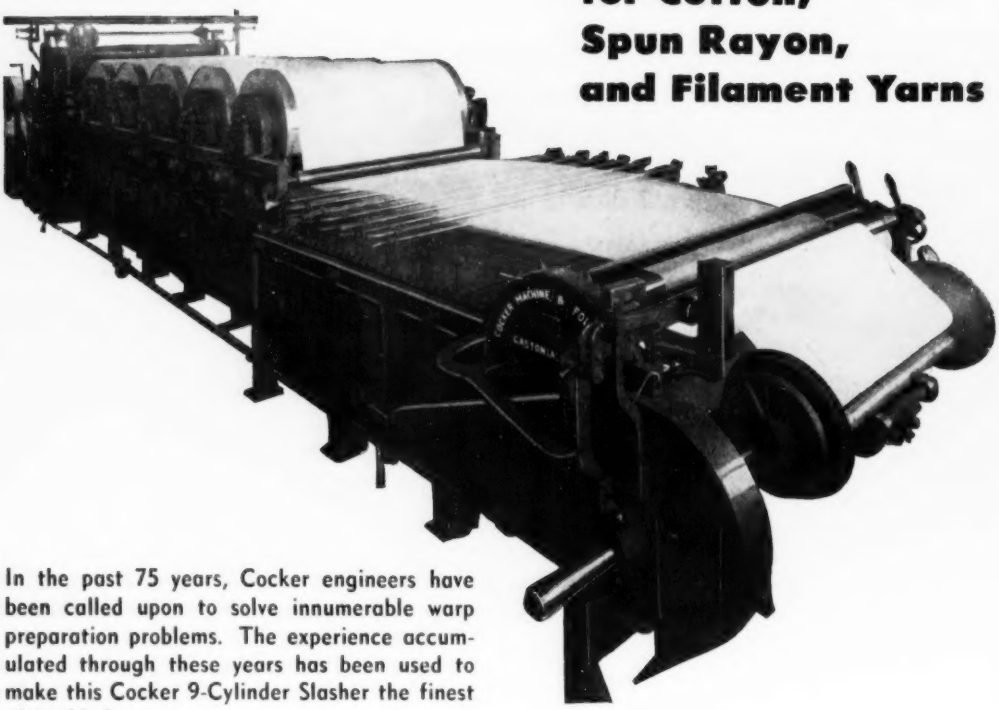
A-C ALLIS-CHALMERS

ALLIS-CHALMERS

Originator of the Multiple V-Belt Drive for the Textile Industry

The Cocker High Speed 9-Cylinder Slasher

for Cotton, Spun Rayon, and Filament Yarns



In the past 75 years, Cocker engineers have been called upon to solve innumerable warp preparation problems. The experience accumulated through these years has been used to make this Cocker 9-Cylinder Slasher the finest of its kind.

Every feature of proven worth is included in this slasher. Its sensitive automatic controls and recording devices increase production and improve quality. Heavy construction permits continuous high speed operation with a minimum of vibration and wear. All parts are engineered for long, trouble-free service and are easily accessible for quick repair, thus keeping down-time to a minimum.

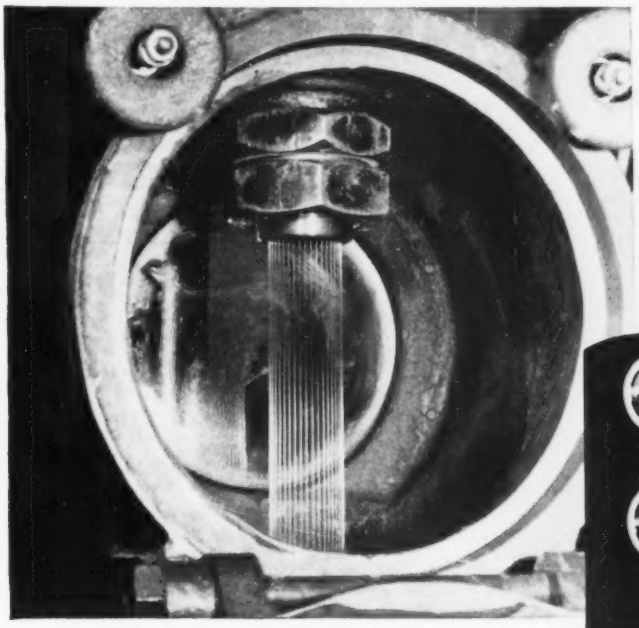
Write or wire us for full information on this and other Cocker warp preparatory equipment.

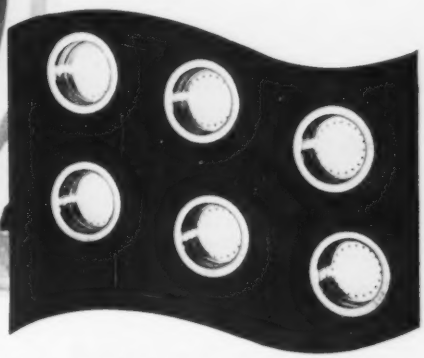
Cocker Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

STAINLESS STEEL SPINNERETTES extrude a liquid synthetic which solidifies into fine, water-resistant yarn the instant it meets a stream of hot air. As loose rust and scale might plug tiny spinnerette holes, causing yarn imperfections, stainless steel's corrosion-resistance and ease of cleaning are vital. Stainless steel also protects yarn color and color stability against metallic-contamination effects. In its journey to spinnerettes, liquid "dope" travels through pipes, mixers, tanks of corrosion-resistant stainless steel.

Enduro—THRIFTY METAL OF 10,000 USES





CORROSION EXCLUDED WHERE YARN IS EXTRUDED

Republic ENDURO Stainless Steel stubbornly and effectively *resists rust and corrosion.* Textile equipment made of it is endowed with a natural immunity to dye bath chemicals and bleaches . . . resists the corrosive action of superheated steam. Result: product-contacting ENDURO surfaces stay clean, smooth and unpitted. They offer no foothold for accumulations of dirt or other contaminating substances. They discourage the build-up of corrosion products which might foul the equipment, the system or the product.

With corrosion—and corrosion products—forestalled, production moves steadily, with fewer shutdowns for periodic cleanouts or replacements. Equipment life is lengthened substantially. Maintenance costs plunge to record low levels. Thus, you pay no financial penalty for *all* of ENDURO's many advantages—in fact, you save.

Booklet 444, written especially for the textile industry, lists pertinent properties of Republic ENDURO Stainless Steel, and gives specific data. Write today for your free copy.

REPUBLIC STEEL CORPORATION

Alloy Steel Division • Massillon, Ohio

GENERAL OFFICES • CLEVELAND 1, OHIO

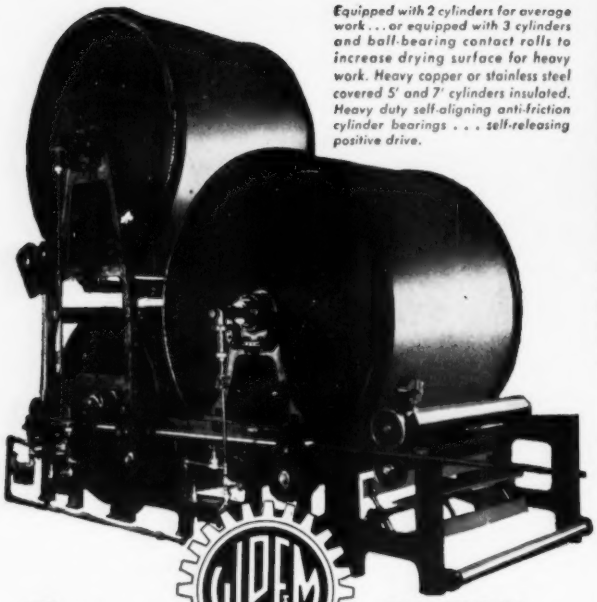
Export Department: Chrysler Building, New York 17, N. Y.

Enduro **STAINLESS STEEL**

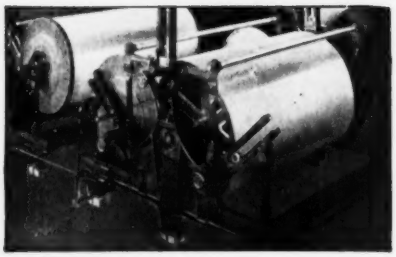
REG. U. S. PAT. OFF.

REPUBLIC STEEL

✓ **Check ALL 10 Advantages:** • RUST AND CORROSION-RESISTANCE • HEAT-RESISTANCE • HIGH STRENGTH • NO METALLIC CONTAMINATION • SANITARY SURFACES • EASY TO CLEAN • EYE APPEAL • EASY TO FABRICATE • LONG LIFE • LOW END COST.

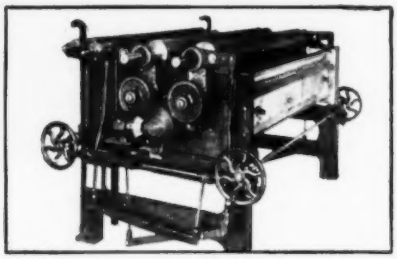


Equipped with 2 cylinders for average work . . . or equipped with 3 cylinders and ball-bearing contact rolls to increase drying surface for heavy work. Heavy copper or stainless steel covered 5' and 7' cylinders insulated. Heavy duty self-aligning anti-friction cylinder bearings . . . self-releasing positive drive.



WHITE CREEL (above) — positively driven — controls yarn stretch; makes sizing faster, more uniform; smooths starts and stops; eliminates breakage and waste. Also available: standard over-under type creel with continuous side rails or extra-height, close-coupled creel for limited space. All creels ball-bearing equipped.

The new WPF&M COTTON SLASHER



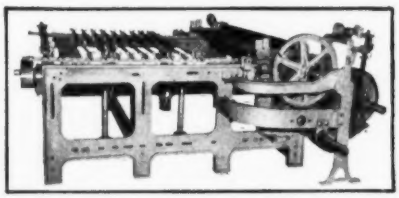
Stainless steel SIZE BOX with extra deep bronze stuffing boxes. Size rolls mounted on ball-bearing journals. Special squeeze-roll lift eliminates strain . . . keeps squeeze rolls accurately positioned over size rolls.

Sure cure for size troubles!

Here's a new, improved, mill-tested Slasher . . . combining many special features and equipment . . . that's designed to correctly size the lightest gauze or the heaviest sheeting at top speed and lowest cost.

Whatever your specific mill requirements and problems, the WPF&M Slasher can be adapted to fit your needs and cure your sizing troubles.

Check the many outstanding features found only in the WPF&M Slasher. Let us show you how modern slashing equipment and methods can increase production, improve quality and reduce cost.



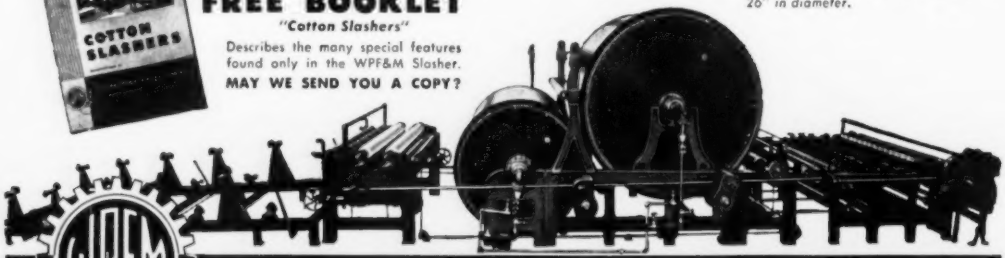
HEAD END, built for single or double beams up to 26", is ball-bearing throughout, either friction or motor driven with variable speed transmission, variable speed single drive, or multi-motor drive. Independent beam wind-up for beams over 26" in diameter.

FREE BOOKLET

"Cotton Slashers"

Describes the many special features found only in the WPF&M Slasher.

MAY WE SEND YOU A COPY?



Manufactured by

WEST POINT FOUNDRY & MACHINE CO.

WEST POINT, GEORGIA

Did You Ever Figure How

STE-HIDE SHUTTLES

Can Save You Money in Weaving Woolens and Worsteds?

The tough, rugged Ste-Hide covering—Phenolic Impregnated Cloth—Increases loom hours per shuttle.

Abrasion resistance is so high—The surfaces become smoother as wear increases.

You will have difficulty wearing them out.

All the refinements you want in a shuttle.

Equipped with the celebrated #108 Eye Series with its superior advantages, including rear and center tensions and plain eyes all interchangeable, for standard and reverse winds.

Hard chrome plated pins throughout that will not cut.

Ask us for the complete story of how your costs can be reduced in Weaving Woolens and Worsteds.

Southern Shuttles Division

(Exclusive Shuttle Manufacturers & Specialists)

of **STEEL HEDDLE MFG. CO.**

621 E. McBee Ave., Greenville, S. C.

Our new, modern Shuttle Plant at Paris, S. C. is now open to better serve your needs.

3 REASONS WHY

Taylor should control your slasher

BELOW you see the Taylor-controlled Cocker slasher at Laurens Mills, Laurens, South Carolina. On the basis of its fine performance, here are just three out of many good reasons why Taylor Automatic Slasher Control can save *you* money and increase *your* production.

1. The Taylor Control System measures and controls *by the condensate temperature*. This assures the closest possible relationship to the actual skin (face-of-slasher-drum) temperature.

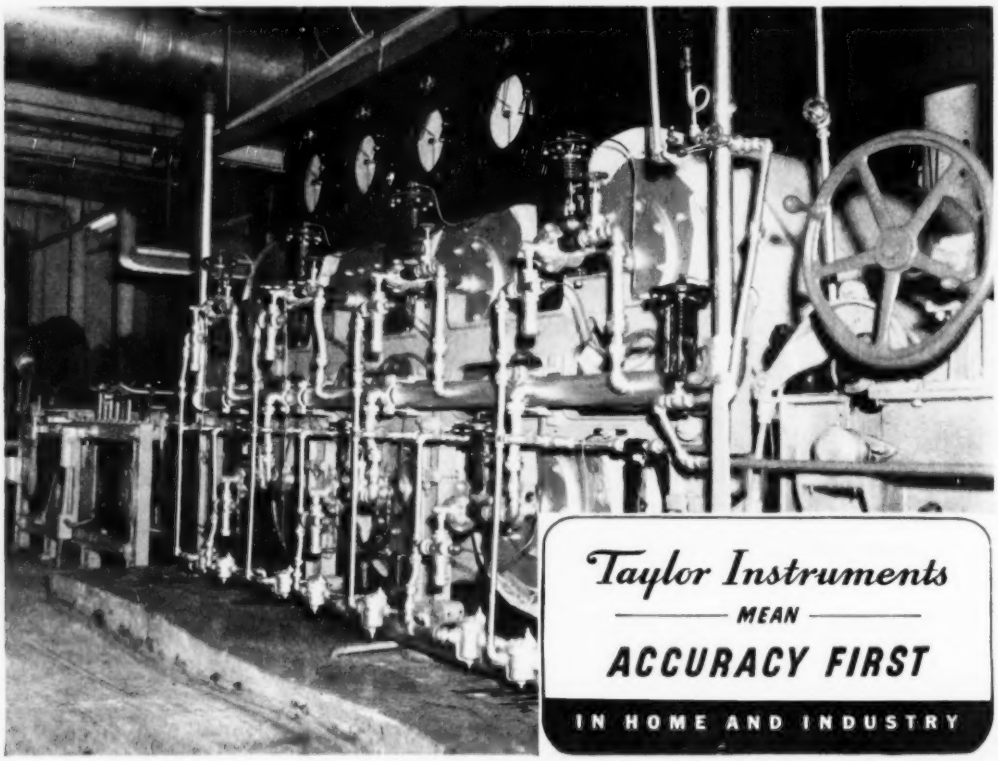
2. Quick heat-up. It automatically compensates for condensate removal difficulties encountered during start up, slow motion or trap troubles by operating a pilot valve which automatically opens condensate by-pass valve, disposing of air and water quickly. No more time lost waiting for traps to empty. Result—heat-up is at least 50% faster.

3. Taylor System of air injection permits condensate to be removed from cans operating below atmospheric pressure. This gives you accurate control *regardless of operating temperature*. Whether you have a 5, 7, 9, or 11 cylinder high-speed slasher, we can equip it with automatic Taylor control (either individual or group).

And of course, we furnish an automatic Taylor control system for every phase of the slashing operation: *size cooking; storage kettles temperature control, size box level and temperature control*, and *slasher cylinder temperature and pressure control*. Ask your Taylor Field Engineer, or write Taylor Instrument Companies, Rochester 1, N. Y., or Toronto, Canada.

• • •

Instruments for indicating, recording and controlling temperature, pressure, humidity, flow and liquid level.



Taylor Instruments
MEAN
ACCURACY FIRST
IN HOME AND INDUSTRY

Come spring or fall Housecleaning is a regular job!

For better living in a bright, cheerful home, set up a regular housecleaning program.

Have your Full-Fashioned Knitting Machines checked—regularly—to keep them at highest efficiency . . . Follow a regular program for reneedling and your needle bars are always in shape for better knitting . . . Follow a regular program for reconditioning and your plant is always at peak performance. We will be glad to discuss this matter of regularity as it applies to your mill operation.

TEXTILE MACHINE WORKS • READING, PA.

The "READING"
Full-Fashioned Knitting Machine

Strength where it's required

Textile Spring-Beard Needles are strong at every crucial point . . . strong at the butt . . . strong at the beard . . . strong at the shank . . . strong at *every* point. This strength is a result of a special steel formula, superior tempering and scientific controls — automatic and electronic — important steps in the production pattern of Textile Spring-Beard Needles.

Strength is but one of the many advantages you get from Textile's rigid, quality controls. Specify precision-made Textile Spring-Beard Needles for your needle bars. You'll get finer fabrics and outstanding knitting results.

TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

For Full Fashioned and Warp Knitting

FOR COTTONS, RAYONS, MIXED GOODS

RAPIDASE saves you money because

1—It de-sizes efficiently at high speeds.

This fast-acting enzyme is particularly adaptable for high-speed continuous de-sizing ranges, shorter time in the box or fewer ends on the jig.

2—It is effective in low concentrations.

This concentrated product can be used advantageously in concentrations as low as one tenth of 1%.

3—*High temperatures can be used to increase its activity.*

The starch-solubilizing action of Rapidase is doubled with each 18° rise in temperature between 120° and 200° F, permitting advantage to be taken of the increased penetration and easier removal of the decomposition products at the higher temperatures.

RAPIDASE
for de-sizing®

TECHNICIANS AVAILABLE • WRITE FOR BOOKLET

WALLERSTEIN COMPANY, INC. **180 MADISON AVENUE, NEW YORK 16, N. Y.**

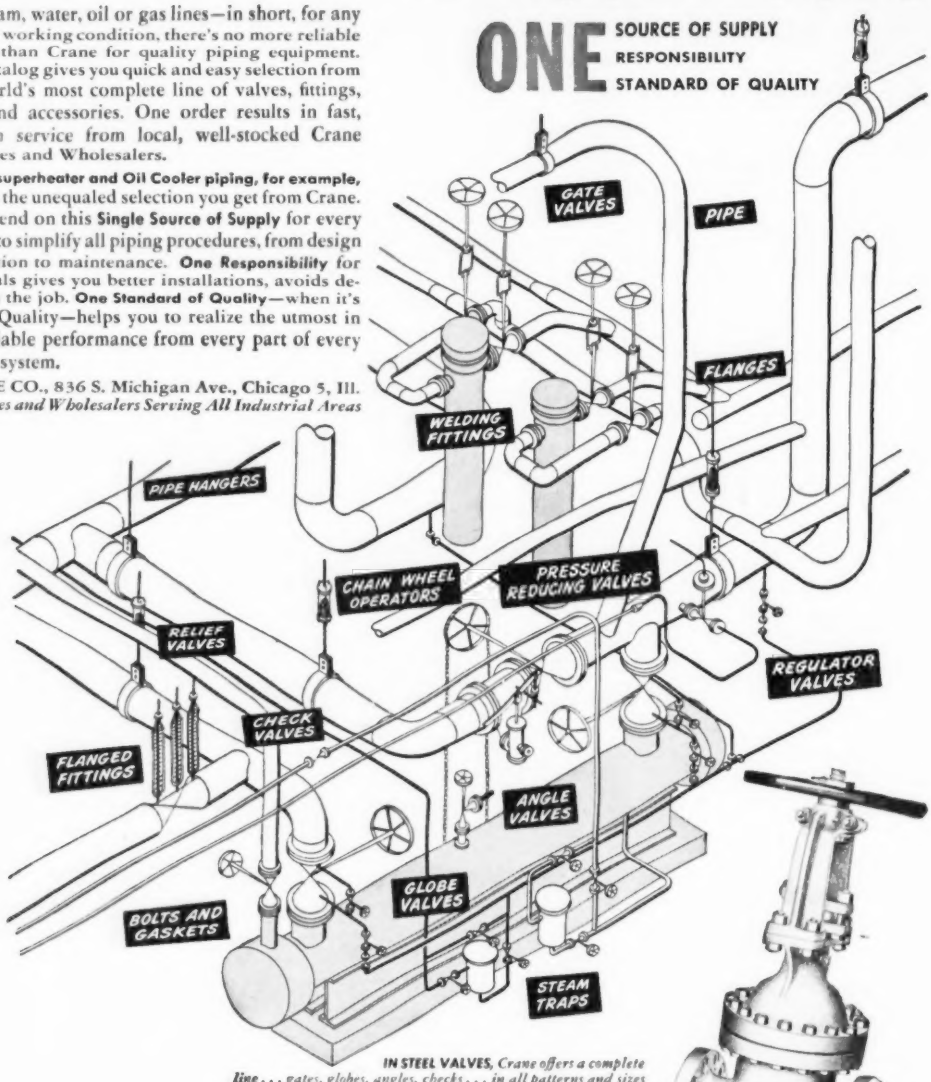
It's CRANE for complete selection for any power piping

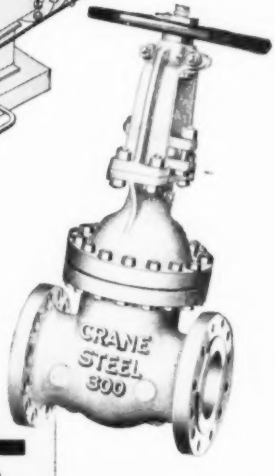
For steam, water, oil or gas lines—in short, for any fluid or working condition, there's no more reliable source than Crane for quality piping equipment. One catalog gives you quick and easy selection from the world's most complete line of valves, fittings, pipe and accessories. One order results in fast, modern service from local, well-stocked Crane Branches and Wholesalers.

This Desuperheater and Oil Cooler piping, for example, typifies the unequaled selection you get from Crane. To depend on this **Single Source of Supply** for every item is to simplify all piping procedures, from design to erection to maintenance. **One Responsibility** for materials gives you better installations, avoids delays on the job. **One Standard of Quality**—when it's Crane Quality—helps you to realize the utmost in dependable performance from every part of every piping system.

CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

ONE SOURCE OF SUPPLY
RESPONSIBILITY
STANDARD OF QUALITY





IN STEEL VALVES, *Crane offers a complete line . . . gates, globes, angles, checks . . . in all patterns and sizes . . . in pressure classes from 150 to 1500 pounds. Shown here, Crane No. 33X 300-pound Cast Steel Wedge Gate, trimmed to handle temperatures up to 900 deg. F. Flanged, screwed or welding ends. See your Crane Catalog, p. 304.*

EVERYTHING FROM . . .

VALVES • FITTINGS
PIPE • PLUMBING
AND HEATING

CRANE

FOR EVERY PIPING SYSTEM

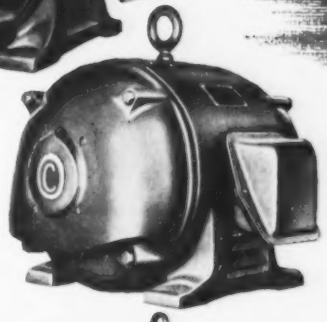
For Motor Protection That Keeps Machines Running

Use 1 of These 4 Century Motor Types

The four types of Century motors shown here are designed to resist the dangers of hazardous atmospheres as described below. As a result they keep machines operating, keep shutdowns to a minimum.

Form J—open rated, general purpose motor—meets the needs for most installations where operating conditions are relatively clean and dry. The top half of the motor frame is closed to keep out falling solids or dripping liquids.

Splash Proof motor—gives the necessary protection where plants must be washed down—keeps water out of the motor even when a hose is applied directly on the frame. It also provides protection against rain, snow, sleet, and ice for outdoor installations.



Totally Enclosed Fan Cooled motors—protect against grain dusts, mist, or fog that would destroy the vital operating parts of the motor. The inner frame protecting the motor is sealed to keep out harmful matter.

Explosion Proof motors—protect against atmospheres charged with explosive dusts or gases. See specifications for specific kinds of explosive hazards.

Century builds a complete line of electric motors in sizes from 1/6 to 400 horsepower to meet the requirements of industrial and commercial needs.

Specify Century motors for all your electric power requirements.

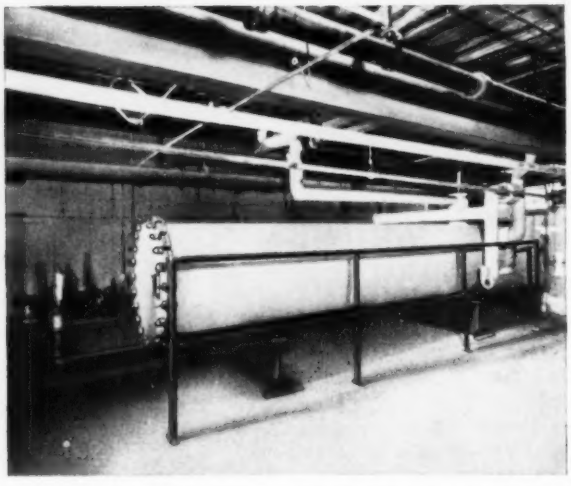
Popular types and standard ratings are generally available from factory and branch office stocks.

Century C MOTORS

CENTURY ELECTRIC COMPANY
1806 Pine Street • St. Louis, 3 Mo.
Offices and Stock Points in Principal Cities

Is Your Sewer Temperature Over 120° F.?

Then You Are Wasting Valuable B.T.U.'s That Sims Will Convert Into Hot Water For Processing.



Linty contaminated sewer water was a problem until Sims discovered how to handle it. One textile plant was planning a boiler addition for producing more hot water—a Sims Survey proved that hot sewer water directed thru a Sims Heat Recovery System provided the extra hot water capacity at almost no fuel cost and will show a 70 to 90% return each year on the total cost of the installation. Investigate the Sims Method that converts wasted B.T.U.'s into profit B.T.U.'s.

Visit our display at Greenville, October 4 to 9th.

THE SIMS CO., Box 1096W, ERIE, PA.

Sims textile type exchanger installed with Sims Type J. Heater shows a 70 to 90% annual return on total first cost at a large textile plant.

Since 1886

THE SIMS COMPANY • ERIE, PA.

Manufacturers of Exhaust Gas Boilers • Heat Exchangers • Storage Water Heaters • Feed Water Heaters Steam Separators • Commercial Type Instantaneous Water Heaters • Oil Heaters • Quenching Oil Coolers Caustic Soda (Sodium Hydroxide NaOH) Recovery Equipment and Unit Type Coal Pulverizers

When you wonder if you can really afford Stainless Steel

—ask yourself these questions

Can you afford the cost of slow, laborious cleaning that easy-to-clean Stainless makes unnecessary?

Can you afford the risk and loss of off-color runs that quickly vanish when non-contaminating Stainless Steel is used?

Can you afford to operate your equipment at slow speeds that keep production low, when your competition is running machines at the top speeds Stainless makes safe?

Can you go on inviting snagging and damage to yarns and delicate fabrics when permanently-smooth Stainless Steel will end this danger?

Can you afford equipment repairs and breakdowns that retard operations and increase your costs, when tough, strong, corrosion-resisting Stainless Steel will reduce them to a minimum?

In other words, can you afford to run your plant without taking advantage of the proved benefits that Stainless Steel assures? To be frank, we don't think so. Not if you want to produce better textiles, faster and economically.

That's why so much of today's high-speed, mechanized equipment is using Stainless Steel in greater quantities and in more places than ever before. And much of it is *U·S·S* Stainless Steel because there's no finer Stainless produced for textile mill application.

We'll be glad to show you how this service-tested *perfected* Stainless can be applied to your equipment—to increase its life, improve its performance, and reduce your costs. Just drop us a line.

AMERICAN STEEL & WIRE COMPANY, GENERAL OFFICES: CLEVELAND, OHIO · CARNEGIE-ILLINOIS STEEL CORPORATION, PITTSBURGH & CHICAGO
COLUMBIA STEEL COMPANY, SAN FRANCISCO · NATIONAL TUBE COMPANY, PITTSBURGH · TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM
UNITED STATES STEEL SUPPLY COMPANY, WAREHOUSE DISTRIBUTORS, COAST-TO-COAST · UNITED STATES STEEL EXPORT COMPANY, NEW YORK

U·S·S STAINLESS STEEL

SHEETS · STRIP · PLATES · BARS · BILLETS · PIPE · TUBES · WIRE · SPECIAL SECTIONS

9-527

UNITED STATES STEEL

"Me . . . stock all those endless V-Belt sizes?"

"Not since I use VEELOS"

"I can replace any V-belt in our plant with just these reels of Veelos."

That's a typical Veelos user telling you how Veelos cuts V-belt inventory. If you use O, A, B and C widths, four reels of Veelos give you a choice of more than 316 sizes. Use only A and B? Then two reels are all you need.

Buying matched sets of endless V-belts is costly. Forget it with Veelos. Forget, too, belt deterioration and obsolescence. Veelos on reels saves storage space . . . simplifies stock records.

Veelos is quickly and easily installed. On drives with fixed centers or outboard bearings, Veelos is installed without moving the motor or dismantling the machine. It provides substantial savings in installation and maintenance costs.

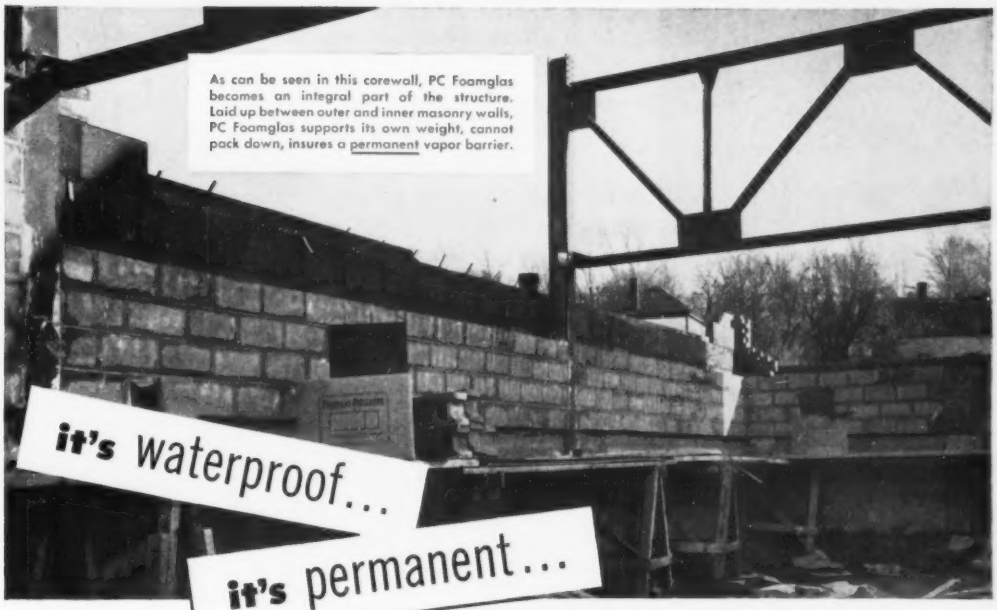
VEELOS
THE LINK
V-BELT

SEND FOR FREE VEELOS CATALOG. It shows how you can benefit from the many important advantages of Veelos. Fully illustrated. Complete engineering data. Write for it.

MANHEIM MANUFACTURING & BELTING COMPANY
MANHEIM, PA.

ADJUSTABLE TO ANY LENGTH · ADAPTABLE TO ANY DRIVE

Made in all standard sizes, fits all standard grooves. Packaged on reels in 100-foot lengths. Sales engineers in principal cities; over 300 distributors throughout the country. Veelos is known as VEELINK outside the United States.

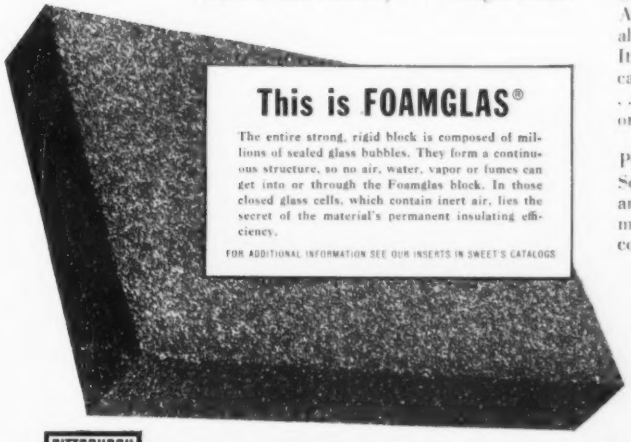

As can be seen in this corewall, PC Foamglas becomes an integral part of the structure. Laid up between outer and inner masonry walls, PC Foamglas supports its own weight, cannot pack down, insures a permanent vapor barrier.
it's waterproof...
it's permanent...

it's FOAMGLAS

■ Water *cannot* get into or through PC Foamglas insulation. That's one of the reasons why it's so useful for textile mills. For where the high humidity levels maintained in such plants often cause ordinary insulating materials to lose much of their efficiency . . . Foamglas insulation, being waterproof, maintains its original insulating efficiency *permanently*. No vapor seal is required.

Big, rigid blocks of Foamglas are composed of millions of tiny hollow glass cells that give the material excellent insulating properties. And, besides being waterproof, Foamglas is also weatherproof, fireproof and verminproof. It doesn't rot, check, warp, swell, or shrink. It can be used on walls, floors, roofs and ceilings . . . without fear of costly repairs, maintenance or replacement.

Investigate the possibilities of *permanent* PC Foamglas before you insulate your plant. Send for our latest authoritative booklets. They are packed full of helpful facts. Just fill in and mail the coupon below and we'll send your free copies. There's no obligation.



This is FOAMGLAS®

The entire strong, rigid block is composed of millions of sealed glass bubbles. They form a continuous structure, so no air, water, vapor or fumes can get into or through the Foamglas block. In those closed glass cells, which contain inert air, lies the secret of the material's permanent insulating efficiency.

FOR ADDITIONAL INFORMATION SEE OUR INSERTS IN SWEET'S CATALOGS

Pittsburgh Corning Corporation
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Please send me, without obligation, your FREE booklets on the use of PC Foamglas insulation for:

Roofs ..... Walls ..... Floors .....

Name .....

Address .....

City ..... State .....

PITTSBURGH ® PC CORNING **FOAMGLAS INSULATION**

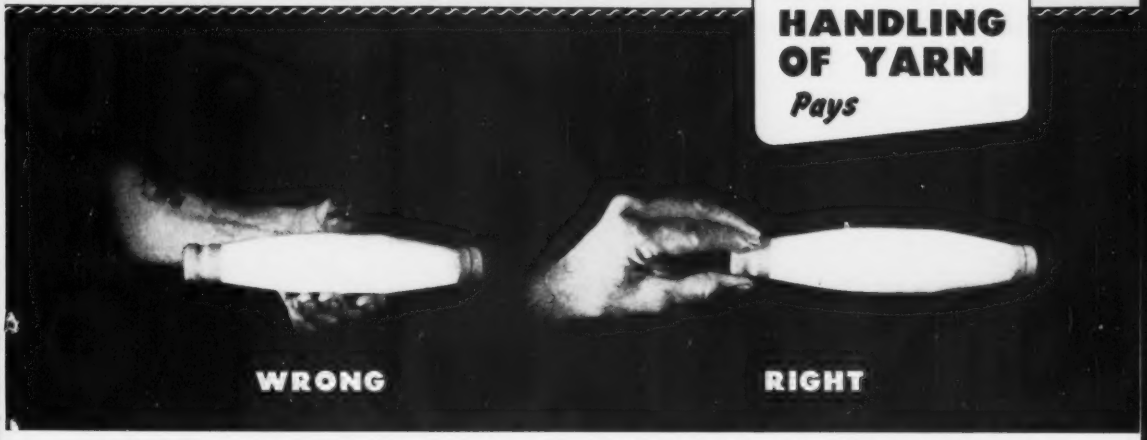
. . . when you insulate with FOAMGLAS . . . you insulate for good!

Clearer, sheerer hosiery fabrics . . . more firsts, fewer seconds, and a lower unit cost . . . There's bigger profit for you in full-fashioned knitting with Royersford Spring-Beard Needles. For Royersford Needles are a product of the technical skill of three generations of master needle makers. That is why they are first choice of America's leading hosiery manufacturers. After all, it's the needles that knit the stocking.

ROYERSFORD NEEDLE WORKS, INC., Royersford, Pa.
Makers of a complete line of Full-Fashioned specialties.

Royersford

—the Master Needle Maker



THE YARN ITSELF should never be touched. Finger marks or oil cause knitting press-offs.

PIRNS OF NYLON YARN should be handled by the ends when they are placed on the machine.

FULL-FASHIONED MILLS Experiment With Yarns

HIGHLIGHTS: "Grenadine" and "compensene," old silk-yarn twists, are being applied to nylon—Improper yarn handling results in press-offs—Better yarn or costly three-carrier knitting can prevent fabric rings—Throwing is vital—Operating 60-gage machines involves minor changes.

By H. B. LeFEAUX
Consulting Editor, TEXTILE WORLD

IN THE LAST FEW MONTHS, full-fashioned hosiery manufacture has become very competitive. Today, most mills are working on new constructions such as the sandal foot, various types of heels, and different twists in yarns. This activity adds up to widespread efforts to provide selling points in an increasingly competitive market. While some of these constructions were widely used during the days of knitting with silk, much hope at present is based on making a better stocking by different twistings of nylon yarns.

The throwing of yarn is a vital part in the manufacture of hosiery, since all multifilament yarn requires throwing. To a large extent, throwing can determine hosiery quality. Twist in the yarn holds the filaments together, changes the yarn from a flat to a round shape, and also adds a delustering effect.

Some experimental work is now being done with nylon yarn in high twists, commonly called "grenadine" and "compensene." Both of these twists were used in silk hosiery. Applied to nylon, this high twisting will be expensive, especially in the 10- and 15-den. sizes.

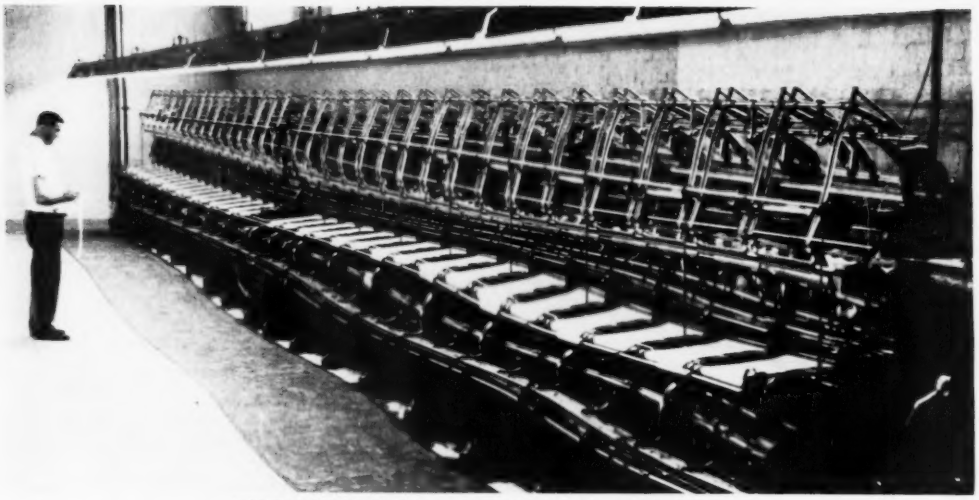
The sizing material applied to the yarn is to render it suitable for knitting. In multifilament yarn, the sizing performs two definite functions: the stiffening material prevents the filaments from separating and gives the yarn flexibility for knitting. Both of these functions help prevent pulled threads.

TROUGH SOLUTION. The proper trough solution plays an important part in the knitting of nylon yarn that has been sized. If the trough solution strips off too much of the sizing as the yarn passes through it, the result will be a flimsy fabric that is readily susceptible to pulls and is hard to seam. If the solution does not penetrate the sizing enough to make the yarn pliable during the loop formation, irregular stitches will be made. The yarn must be pliable enough to be kinked properly around the needles during the loop formation.

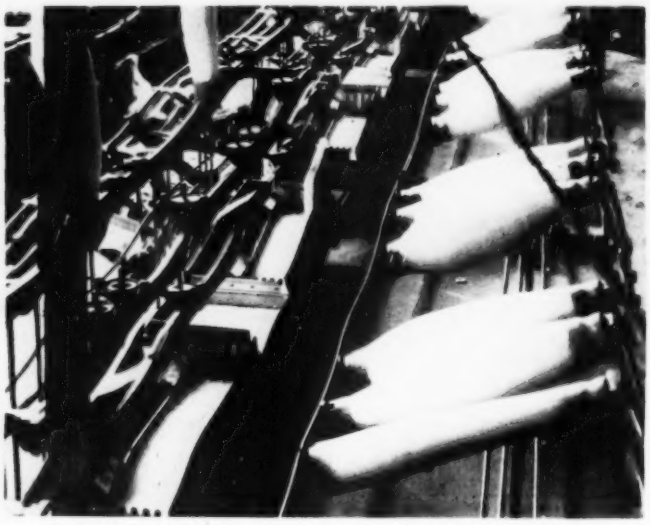
When yarn is received from the throwster, all merge lots must be kept separate. Mixing the merge lots during knitting has a tendency to cause variations in shades after dyeing.

In knitting direct from the 15-den.

ANNUAL *Knitting* **SECTION**



NEW 60-GAGE MACHINES have points of superiority as well as limitations.



THREE-CARRIER KNITTING will eliminate fabric rings, but it is a costly practice.

pins, it is important that the knitter does not touch the yarn when he takes the paper off the pirn. He should hold the pirn at the end to avoid getting finger marks and oil on the yarn to cause press-offs.

On high-speed machines, the yarn must be placed so that it will get the very minimum amount of drag. It has been found that a pirn will knit better if the back (the part that is slotted) is nearest the porcelain eye in the water trough. To avoid press-offs, drop wires must be kept clean, rings must be changed when signs of wear appear, and carrier tubes must be changed when they are grooved.

There are several ways that 15-den. pirns are being mounted on the machines. Many oil-base solutions in the water trough (or oily felt that the yarn passes over) will help to secure a much more even loop during the loop formation.

In most mills, a high percentage of throw-outs is caused by unevenness in 15-den. yarn making rings in the fabric. There are two ways that this condition can be corrected: better yarn and knitting with three carriers. The latter practice is extremely costly because of the loss of production and bad selvages on the machine, but it will eliminate practically all throw-outs due to rings.

60-GAGE MACHINES. Full-fashioned knitters are anticipating new yarn-handling and knitting problems with the new 60-gage machines now going on the market in a small trickle. Although the machines are about the same as 32-sections 51-gage machines, a different fabric is turned out on them.

Limited experience with the 60-gage machines, in comparison with 51-gage machines, indicates that:

1. Maintaining knitting conditions of 80° F. and 50% r.h. is a necessity.

2. Flexibility of knitting different weights of hose or different deniers of yarn is greatly decreased.

3. About 5% fewer gray menders should be made and the finished stocking should be several times more snag resistant because of more fabric per inch. However, the stocking will look and feel heavier than a 51-gage stocking made from the same yarn.

4. A better fit can be made because the increased needles give better control of narrowing.

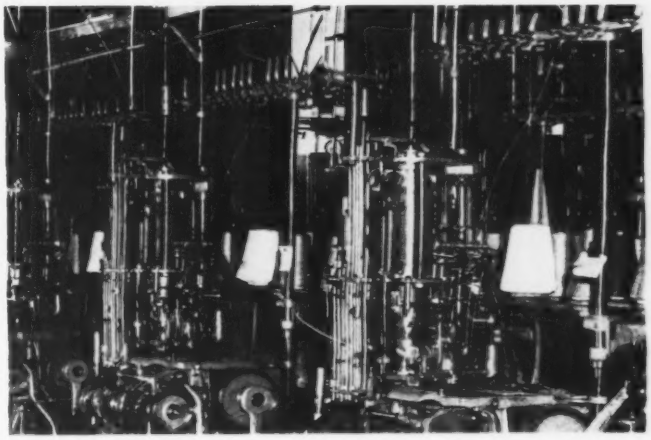
Knitting 15-den. nylon direct from pirns has been found satisfactory for making a stocking with 54 courses per inch. Welt yarn of 50 den. with 10 tpi. can be used, but more satisfactory results can be obtained with 40-den. welt yarn. For reinforcing or splicing, 30-den. nylon yarn is as heavy as should be used. Trouble is encountered if the weight of splicing yarn is increased to 40 den.

Handling of WOOL YARN Affects Feel of Fabric

Good HANDLING OF YARN Pays

HIGHLIGHTS: *Dry yarn is unruly —Package dyeing preferred to skein dyeing—Layer of cotton yarn aids rewinding worsted—System of marking prevents mixing lots.*

By WALTER A. SIMOND



NATURAL WORSTED YARNS yellow with age and should be used soon after they are received by the mill.

MUCH CARE must be taken in the handling of worsted knitting yarn in order to obtain the proper feel or hand of the finished knitted fabrics.

White or natural-colored yarn takes on a yellowish tinge with age and is put through no subsequent dyeing process to cover variations in shade.

The moisture content is usually correct when the yarn arrives at the knitting mill, but yarn in stock should never be kept in a dry atmosphere. When it becomes too dry, it has a harsh feel and is more unruly to handle and more likely to be attacked by moths and cockroaches.

Arrangements should be made with the worsted-yarn manufacturer for keeping lots of yarn separate, since a slight variation in grade may spoil stockings in which two grades of yarn are used. Lots may be marked by colored cops or cone tips when both the manufacturer and knitting mill have identical lists for keeping tab on deliveries.

Whether to have yarn come on cops or cones depends upon the mill's method of preparation for the knitting machines. When yarn is used as received, it will usually be found best to have it come on cones; but for package or skein dyeing, it is best to have it come on cops.

Generally, skein dyeing should be avoided because of the trouble it causes in fulling, the rewinding costs, and the loss in waste yarn. Package dyeing on spring tubes is usually the more satisfactory and less costly method.

Dye-package winding must be correctly done to obtain level dyeing of the knitting yarn. Winding tensions must not be too heavy, and best results will usually be obtained with packages weighing about 1¼ lb. It is important that all of the packages in a lot be of the same size. Covering the dye springs with a ¼-in. layer of cotton yarn helps in rewinding fine worsted yarns from the dye packages. The layer of cotton yarn can be rewound and used for backing yarn in worsted-face plated goods.

In winding from cops, the supply spindles should be high enough to have about 1½ in. of space between the tip of the cops and the guides (pigtails) above them to prevent a double balloon of the yarn and wrapping of the yarn around the cops, both of which will cause excess tension or breakage at the bottom of the cops.

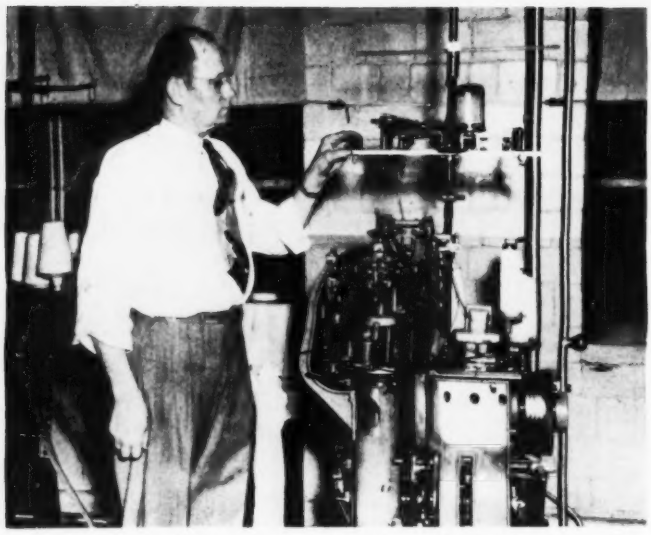
In winding the yarn on cones for knitting, good marking of the cones for both count and grade is important, especially when different grades of the same count are used. Winding in strips of colored paper is a satisfactory method of identifying count and grade. Strips about ½ in. wide and 3 in. long folded over the bottom edge of the cone, with three or four wraps of yarn made by hand before the cone is placed on the spindle, will keep the paper in place and will allow the identification mark to fall off when the cone is empty.

If the cone has a colored tip, the tip color may identify yarn count and a single paper strip identify the grade. If the cone is gray, two colored slips may be used: one for the count and the other for the grade. The paper strips may also be used for twisted yarn of different fibers. A simple color scheme, posted at the winders, could be arranged as follows:

Color	Red	White	Blue	Yellow	Green	Black
Stock Nos.	1	2	3	4	5	0
Worsted grades	X	XXXX	C	70/30	60/40	50/50
Cotton grades	P	CP	Lisle	Merc.	Gas Merc.	

The color to use for any yarn number is determined by dividing the yarn number by 6; as 30s ÷ 6 = color No. 5; 20s ÷ 6 = color No. 3; etc. Differences of six numbers are recognized at a glance by those who handle yarns.

If cones are to be refilled with the same yarn, knitters may take their cones down while there is still a little yarn on them to hold the paper marks in place. This practice will avoid loss from tailings.



YARN-CONTROL DEVICES that pay off on 400-needle machines include tension controls (between author's fingers), stop motions and lights, yarn-balloon controls, and oil troughs.

Good HANDLING OF YARN Pays

HIGHLIGHTS: Damaged 400-needle hosiery often caused by knitter's carelessness in handling cones —A good lubricant for nylon yarn is a "must" for quality fabric and uniform hosiery sizes—Tension controls and ballooning devices can correct most package faults.

By CHARLES W. ARROWOOD

PRESS-OFFS and STOPS Reduced by Yarn Control

UNNECESSARY PRESS-OFFS and stops occur on 400-needle knitting machines unless some safeguards are adopted by the mill in the handling of yarns. Not enough precautions are taken in many knitting rooms in dispensing yarn cones to the machines. Operators may be careless in unwrapping new cones of yarn and press their finger tips or nails into the yarn package. The yarn may hang during the knitting process and either press off the hose or cause fabric damage. The uneven tension of yarn from damaged cones is often the cause of unnecessary machine stops.

Operators should handle nylon cones by the tip or by the bottom of the cone. The cones are wrapped when the mill receives them; by unwrapping each cone carefully and placing it on a yarn carrier or spindle, the operator can avoid considerable damage and waste of expensive yarn. The yarn from damaged or snarled cones is usually "skinned off," and some record of waste should be made from time to time in order to show the knitters the importance of the details of proper yarn handling.

Tied in with such a practice is the necessity for proper and ample supplies of yarn to the knitters at the right time. It is not uncommon for an operator to toss a cone of yarn from her supply to another knitter who may need it. Frequently, such cones fall to the floor or strike the machines, or otherwise become damaged.

TRAY HANDLING. A small hand tray can be provided with a number of spindles as a means of carrying yarn from the case or conditioning room to the knitting machine. When the quantity of yarn necessary requires it, a special hand truck may be fitted with these trays for the trip to the knitting room.

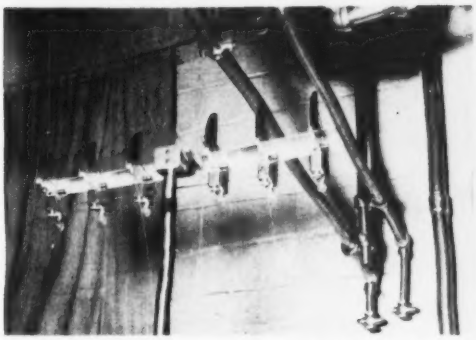
After conditioning (at 50% r.h. usually), fine nylon yarns give best results at most mills by being processed through a solvent and lubricant. Such a solution helps the needles and sinkers to shed the gummy deposits of size and acts as a lubricant to those parts. One mill uses nylon oil in a bottle-and-wick system on the knitting machines. Better quality of work, fewer streaks, and more even sizes and lengths of hose have resulted from this system, particularly with respect to the main yarns that go into the leg and foot.

The bottle-and-wick system is located near the yarn feeding point. It has a constant-level oil trough to accommodate one or more yarns. It should be noted that the oil softens and conditions the yarn and causes it to knit more evenly formed loops. It also tends to prevent the picking or snagging of the finished fabric.

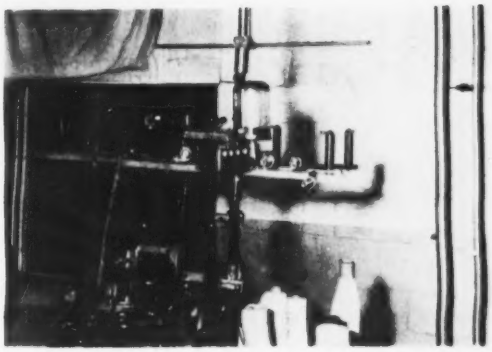
Since yarn tension is one of the most critical factors in the knitting of nylon on the 400-needle machine, any device or method that improves the control of this tension will be found most helpful. A new device that combines a stop motion and yarn tension has recently been patented. The device relieves the tension on the yarn when it becomes too great and stops the machine before the yarn

Mr. Arrowood is head of knitting at the North Carolina Vocational Textile School, Belmont, N. C.

NO YARN BREAKS HERE . . . . . .



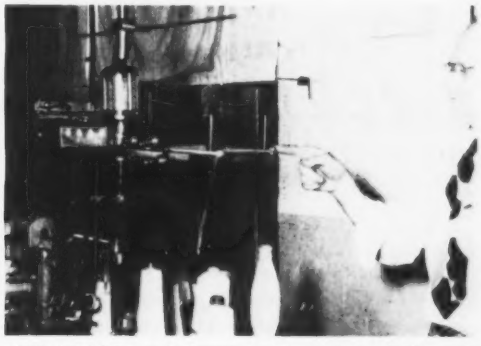
STOP MOTIONS above machine stop the machine if tension on a yarn end gets too tight. Small light under stop motion goes on.



YARN-TENSION DEVICE (adjustable for any normal tension) releases the yarn when a break is threatened and the knock-off goes into action.

ATTACHMENTS IMPROVE YARN FEEDING . . . .

OIL TROUGHS are fed from the bottle of nylon-yarn lubricant through a system of wicks. Yarn passes through the troughs.



YARN BALLOON can be increased or decreased to suit the supply package by raising or lowering the arm that holds the porcelain eye.

breaks or the hose is damaged. The tension factor on the device may be adjusted to the amount desired for the particular denier of yarn. When the yarn becomes too taut, the device relieves the tension until the yarn becomes free again.

Stop motions similarly are aids to better yarn handling because they save a waste of high-priced yarn, in addition to the savings in needles and production.

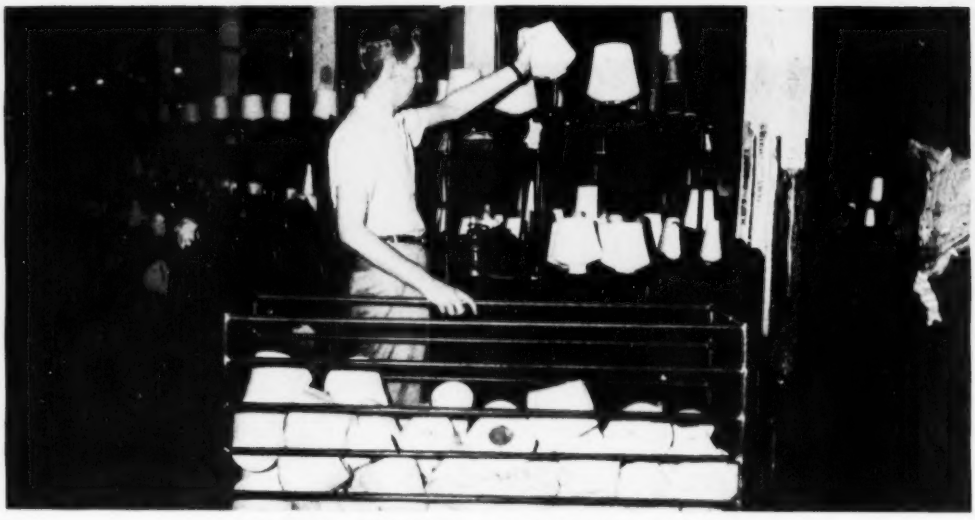
HOSE LENGTHS. Maintaining even and regular lengths in hose sizes has been one of the main problems confronted by 400-needle knitters. Insofar as natural 15-den. nylon is concerned, one of the difficulties has been the tendency of the yarn, during knitting, to penetrate the strands of a previous wind. The elasticity and strength of the yarn sometimes cause uneven feeding from some types of cones or bobbins, and the result is uneven lengths or breakbacks. A number of preventives have been used to remove this difficulty with nylon packages.

One satisfactory solution has been found in the use of the 6-in.-diameter tube with slack or no-twist nylon. This package has been found superior from the standpoint of even and regular feeding. Less breakbacks and more even lengths have also resulted from the larger package, which permits more ballooning and less tautness.

More yarn is also wound on the larger package, netting more production and hose per package, and fewer stops.

BALLOONS. Proper ballooning devices will offset most difficulties of this type, regardless of the type of package. One device to produce a good nylon balloon is shown in the photographs. It consists of an arm and porcelain guide located just over the bobbin. Its distance from the cone increases the circle of the yarn strand as it unwinds from the cone, and the unwinding nylon swings away from the packages and does not disturb the lay of yarn on the package. Balloon devices are simple and inexpensive, but they are effective tools in nylon-yarn feeding.

Cleaning and maintenance of yarn-feeding devices will also pay off in improved yarn performance. Yarn tensions, especially, should be cleaned regularly of the sizing that accumulates on them. Porcelain guides, balloons, stop motions, and oil troughs should be inspected and cleaned at frequent intervals. Cracks or broken edges on porcelain guides will cause the yarn to break back, cut holes, and run uneven lengths. Consistent maintenance plus regular inspection of all parts of the machine that deal with yarn feeding will back up the careful yarn-handling system and will obtain even feeding—an essential to quality hose regardless of style, type, or yarn.



CLEAN YARN + CLEAN TRUCK + CLEAN HANDS = CLEAN YARN.

CIRCULAR-HOSIERY MILL

Maintains Quality of Yarn

HIGHLIGHTS: Care of yarn can reduce machine stops, seconds, and non-uniform sizes—Special carrier for yarn is used by Rome Hosiery Mills—"Homemade" yarn rack on machine reduces spoilage—Weekend heat gives better Monday-morning start-up.

Good
HANDLING OF YARN
Pays

By E. DALTON WHITE
McGraw-Hill Atlanta Bureau

YARN HANDLING and care of the yarn on the knitting machine have a decided effect on the quality of end products in circular knitting. Mill operators agree that machine maintenance and adjustment can be reduced and fewer seconds result when special care is exercised to obtain the most from quality yarn.

While many mills have not experienced any difficult problems in respect to yarn itself, some have given the subject special attention and have been rewarded by fewer machine stops, fewer seconds, and better and more uniform knitting. Little can be added to purchased knitting-supply packages; but it is important to maintain them in proper condition during storage, handling, and feeding to the machine.

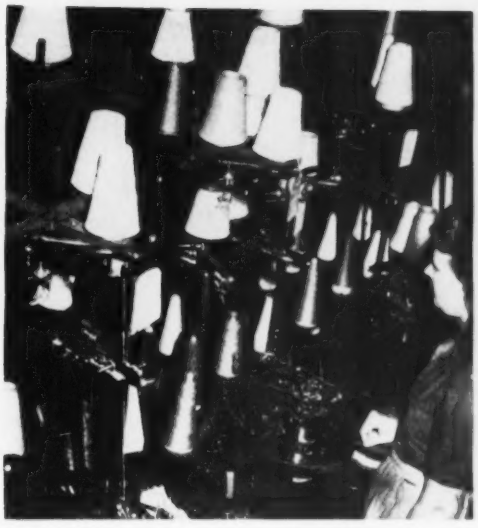
Attention to yarn has been a factor in maintaining quality by Rome Hosiery Mills, Rome, Ga., according to R. E. Primm, superintendent. Rome Hosiery purchases its packaged yarn from Berryton Mills, about 40 mi. distant, where it is coned, conditioned, and shipped in quantities to meet production schedules.

Rome Hosiery produces women's hosiery; children's hose and anklets; crew socks, slacks in ⅜ths, plain and fancy; and men's full-length half hose and anklets, plain and fancy. Yarns used range from 10s to 30s single and plied, carded, combed, and mercerized cotton. The mill also uses some wool and rayon.

YARN SUPPLY. A working supply of yarn is maintained at all times and is stored in the basement. Yarn is trucked from the basement in a specially built carrier to the knitting room and placed on specially built racks mounted on the knitting machines.

Since the present system of yarn handling and storage on the machines was started, no problems have developed that could be classified as being due to loss of moisture in the yarn, cone snags, or soiled cones due to handling.

The cone carrier, with a wooden bottom, was designed and built in the mill shop. It was made from ½-in. galvanized pipe, with the joints welded and smoothed. The carrier is 33¾



RESERVE CONES *are kept on five-cone racks over the yarn-guide arms.*

INSPECTION DURING KNITTING *spots many easily corrected defects.*

in. high, 17 in. wide, and 54½ in. long. The pipe slats are spaced about 5 in. apart. Rubber-tired swivel casters are mounted at the center of each end of the carrier, and stationary casters are mounted on each side of the center. The carrier is painted red to contrast with the color of equipment in the mill.

The wooden yarn racks for the machines were shop-made and are fitted snugly on the tops of the yarn-guide supports. The end of the supply cone is tied to the yarn on the reserve cone so that yarn supply is continuous. The empty cone can be replaced on the machine at the convenience of the operator. A total of five cones can be stored at one time.

The main advantage of the rack is that reserve cones are placed on wooden pegs instead of between the support arms; they cannot fall to the floor to become soiled. A supply of yarn at the machine is always available, and the number of trips to the stockroom has been lessened.

WEEK-END HEAT. A considerable increase in quality and production during the early hours of the Monday shift have been gained by maintenance of a 70° F. temperature in the knitting room over the week end. Only a short time is required to bring the temperature of the room and equipment from this level to the 78° F. maintained during normal operations.

Previous practice was to shut off the heat at the end of the last shift and start up the boilers on Sunday in time to build up temperature to 78° F. by the time the first shift reported Monday morning. Depending upon the severity of the weather, inside mill temperature might drop to around 50° F.

It was found that during the first few hours on Monday, it was difficult to maintain accurate machine adjustments. Knitting was not of the best quality, and there was a large number of seconds due to many causes. This condition continued until room temperature and machine friction brought the temperature of the machines and their working parts up to 78° F.

By maintaining the 70° F. temperature over the week end, the machines never cool and are at room temperature when the shift starts. The reduction in the number of seconds alone has more than offset the extra fuel cost. Also, the condition of the yarn is much better, and more uniform hosiery sizes are maintained.

Another important factor in quality circular knitting is the maintenance of proper tension for each type of yarn being used. This is especially true when several colors are being used. Improper tension makes for variation in the amount of yarn in each loop. The objective is to maintain even tension without strain.

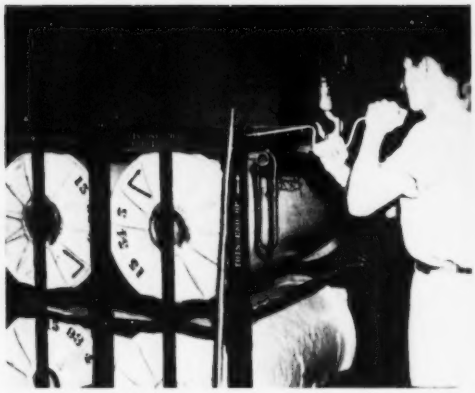
YARN TENSION. Rome Hosiery achieves the needed tension by keeping all yarn-tension units properly adjusted and free from lint. Tension disks and springs are cleaned each day, and adjustments are checked on a regular schedule. In addition to these inspections, double checks are made, if necessary, during size inspections.

It has been found that different colors of dyed yarn may produce a certain amount of drag, causing a too-tight knit. This condition has been corrected, where practicable, by less tension. In extreme cases, supply cones are sprayed with a small amount of kerosene to loosen the yarn. The kerosene easily washes out.

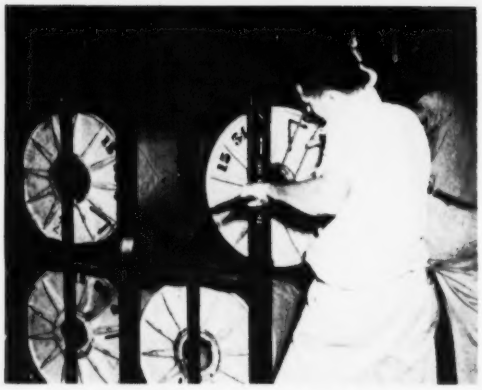
Fly and lint accumulations in the guides and tension devices are sources of trouble that are constantly watched. Yarn breakage and uneven knitting result from clogged yarn guides or tension devices. Well-trained knitters and fixers and a schedule for regular cleaning and maintenance of machines are the most effective means for combatting damaged fabric from these causes.

Rome Hosiery maintains a close check on quality work through each stage of operations and regularly analyzes cloth defects that develop. When a defect is found by a knitter, the machine is stopped and a complete inspection made. If the fault cannot be immediately corrected, the fixer is called.

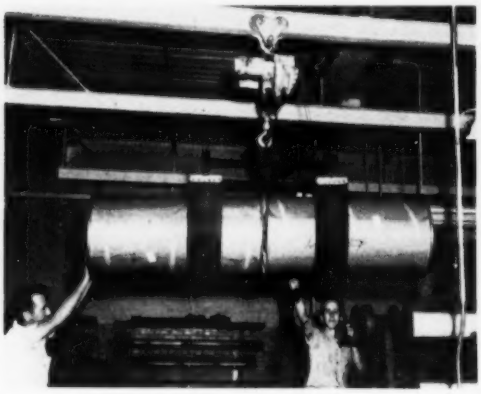
All seconds are classified and returned, together with a report, to the knitting foreman. The foreman then discusses the problem with the fixer and the knitter as a means of preventing a recurrence of the defect. This cooperation and mutual interest in the problem of reducing the possibilities of seconds have produced good results.



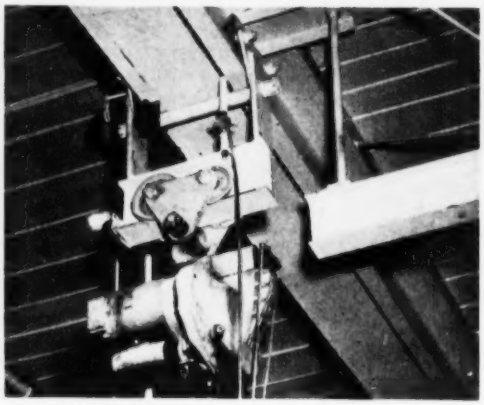
1 NEW BEAM-SHIPPING RACKS holding four beams are loosened by socket wrench.



2 BEAMS ARE REMOVED from rack by special grab on a 1-ton electric hoist.



5 SPECIAL FABRIC GRABS are used to raise and push the beams toward tricot knitting machine.



6 LOCKING DEVICE aligns main carrier with crossrails to knitting machines.

TRICOT-HANDLING System Is Mill Designed

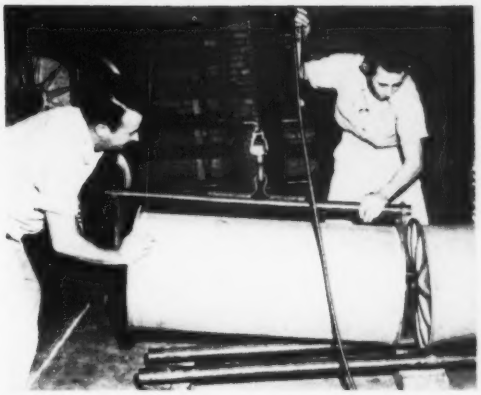
HIGHLIGHTS: *Hornwood Warp Knitting Co., Wadesboro, N. C., designs and builds own materials-handling system for beams and cloth—Tricot beams moved by rack system to storage, by mill-built rails and electric hoist to knitting machines.*

By C. MALLARD BOWDEN
Southern Editor, TEXTILE WORLD

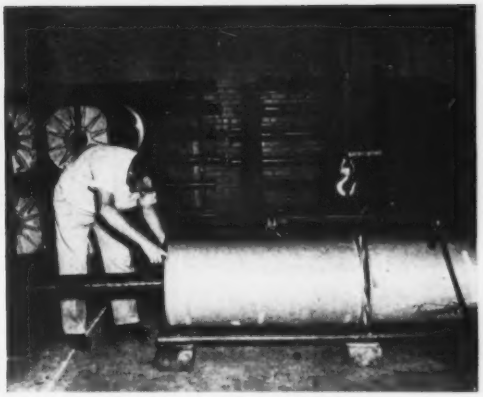
NEW MATERIALS-HANDLING SYSTEMS have cut costs and saved steps at the modern Hornwood Warp Knitting Co. tricot mill in Wadesboro, N. C. The mill revamped its beam-handling system for $523.00, changed cloth-trucking methods for a nominal sum, and installed the new method of rack shipment and storage that was originated by rayon manufacturers about a year ago. The changes, shown by the accompanying photographs, effected a complete overhaul of handling methods. Better-handled yarn, naturally, runs better.

BUILT BY MILL. Like many tricot knitters, Hornwood purchases much yarn that is already warped for the knitting machines, warping only the beams needed for special cloth constructions. The racks in which the beams are shipped serve as holding fixtures for permanent beam storage. Hornwood trucks these racks to yarn storage, saves floor space and handling costs by using the rack system.

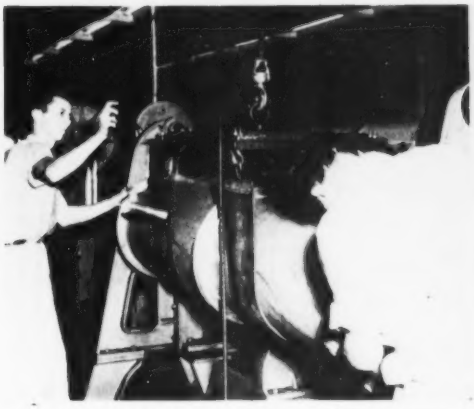
A 1-ton electric hoist and carrier handles the beams from the rack and to the knitting machines. The hoist was purchased, but Hornwood



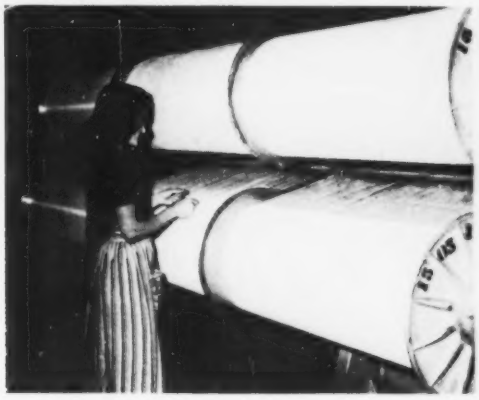
3 A 350-LB. BEAM is laid on holding platform where mandrel must be fitted.



4 MANDREL IS INSERTED into two beams which make a quarter of tricot set.



7 TWO-BEAM LOAD is lowered to tricot machine, and fastened by setscrews through collars.



8 YARN ENDS are pulled through; machine starts on another two-bar tricot fabric.

mounted its own system of rails and devised an ingenious locking and safety device for transferring the load to and from cross rails mounted directly above the machines. The main rail for the carrier consists of a 12-in. I-beam mounted crosswise the mill. At right angles to the main rail Hornwood mounted four 4-in. I-beams that run parallel with the four rows of tricot machines.

Holes were bored in the 12-in. I-beam at the point of intersection by the 4-in. beam. A spring-actuated bolt unit was then fastened to the main carrier so that, when released by a pendant cord, it would enter the hole and lock the main carrier to the large I-beam. When the carrier is in this position, the electric hoist may be moved upon the cross rail to the knitting machines.

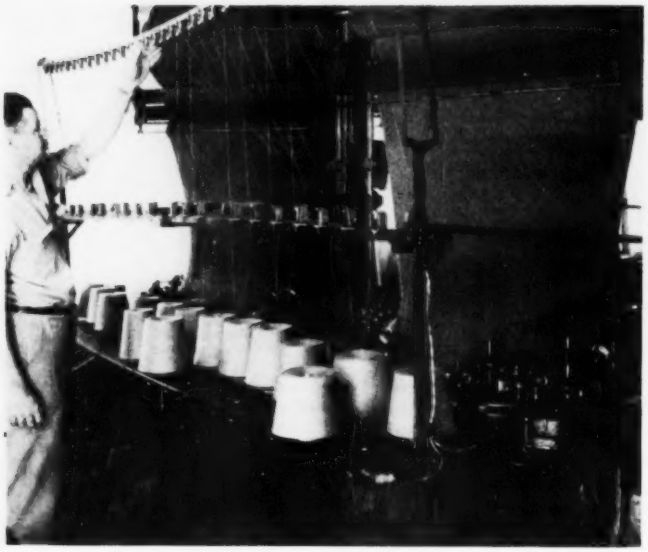
Because of the tricot machine's positive let-off, the yarn beams are cored with a special mandrel. Two beams

Good HANDLING OF YARN *Pays*

are creeled at a time. Each beam has approximately 350 lb. of yarn; the beam weighs 43 lb., the mandrel 125 lb. The hoist is used also for removing empty beams from the knitting machine. Since two trips are made, unloading and loading time amounts to about 1 hr.

CLOTH HANDLING. When the tricot machine is ready to be doffed, the cloth is unrolled from the take-off roll into a truck. The usual tricot truck is 160 in. long and is difficult to maneuver in the aisles between machines. Hornwood's system of cloth trucking makes use of a 90-in. canvas-covered truck with extendable ends so that the full width of 160 in. may be obtained when the knitting machines are doffed. After the cloth is in the truck, the canvas ends are folded back and the truck is pushed to new storage bins.

The storage bins are 10 ft. from the inspection machine, and cloth can be carried that distance very easily. Four feet from the inspection machine is the scale for weighing cloth shipments, and 10 ft. away is the holding fixture for loading tricot cloth into the special canvas-bag shipping containers. The canvas-bag containers are made from 12-oz. duck and have reinforced bottoms. The average cost of the bag is less than 5¢ per trip. Each bag holds 200 lb. of cloth.



Good HANDLING OF YARN Pays

HIGHLIGHTS: Good yarn can be spoiled by improper feeding to the machine—Tension, guide drag, and yarn ballooning can make or break fabric quality—Conditioning yarn on the knitting machine interferes with knitter's primary task—Mobile yarn-storage units more than pay for themselves.

By ALBERT M. YOUNG, JR.

OUTERWEAR MILLS

Stress Handling and Feeding

SOFT, LOFTY YARNS required for most knitted outerwear fabrics demand careful handling in all phases of processing but most particularly during feeding into the knitting machine. Careful choice of fibers and good blending, carding, spinning, and winding may be nullified in the last few seconds before the yarn becomes cloth if full consideration is not given to the details of feeding. Minimum tension and friction, fluency and direction of flow, contact surfaces of guides, and stop motions should be given close attention when the machine is set up.

Tension should be kept to the minimum required to control the flow of the yarn. While it may seem desirable in some cases to use sufficient tension to break down thin places in the yarn before they enter the fabric, usually it is better to inspect for this type of defect at the winding machine. Excessive drag retards the action of knitting burrs and cams and places unwarranted strain on the needles.

Equal tension to all feeds is necessary if rowiness in the fabric is to be avoided. Free flowing yarn will form a large, open stitch; while retarded yarn forms a small, tight one. A rowy condition is more noticeable when wool yarns are being knitted. The natural resiliency of wool permits temporary stretching under tension. After tension is released, the yarn contracts almost to its normal length. If tension is not equal to all feeds, rowy fabric is almost certain to result.

CIRCULAR KNITTERS!

Operators of circular knitting machines not now taking advantage of all the design possibilities of pattern wheels will be interested in a series of articles to begin in the May issue of TEXTILE WORLD. Subjects to be covered are: theory of pattern-wheel knitting, calculating pattern area-widths, laying out areas on graph paper, modifying pattern areas, drafting and reading two- and three-position patterns, filling wheels from two- and three-position readings, etc.

The articles are based on several chapters of a book on "Pattern-Wheel Designing for Circular Jersey Knitting Machines," by Abraham Abrams and Lester Mishcon, to be published later this year by Supreme Knitting Machine Co., 105 Johnson Ave., Brooklyn, N. Y. Prepublication rights to material in the book has been obtained by TEXTILE WORLD, and part of it will appear beginning with the May issue.

TAILING. Tailing of cones has become a standard practice in recent years. There can be no doubt that it is an aid to greater production. However, tailing does complicate the equal tension problem unless compensating devices are used. Cones placed at varying heights do not empty simultaneously; hence, some feeds are required to pull yarn from a greater distance than others.

Probably the most satisfactory compensating device to combat unequal tension is the furnishing wheel. These gear-like wheels are equipped with micromatic settings. While the numbered graduations do not guarantee equal tension settings to all feeds, the adjustability of the device may be used by back-tracking from the fabric. This task is easily accomplished by visually examining the fabric at the needle line and adjusting loop wheels, cams, and furnishing wheels accordingly.

On spring-needle loop-wheel machines, it is necessary that loop wheels and furnishing wheels be synchronized. If the loop wheel uses yarn at a greater rate than that provided by the furnishing wheel, the yarn between the two wheels will be stretched and ultimately broken. If the furnish-

GOOD YARN STARTS HERE. Top jackspools from ring doffers are kept separate from bottom spools. Roving from specific cards is always processed on same spinning frames.

THE OLD AND NEW of yarn handling are shown at Continental Mills. Yarn cases, left, are being replaced by Continental-designed, portable storage units.

ing wheel feeds more yarn than the loop wheel can use, slack yarn will build up between the two and eventually cause damage. Whether or not tailings and/or furnishing wheels are used, it is desirable to have all cones as close to the feeds as available space will permit, and to have them equidistant from the feeds.

Attention to friction is another factor in getting the yarn into the fabric in good condition. Porcelain still seems to offer the best surface for contact with the yarn; it gives less resistance and longer wear than other materials generally in use. Nearly all guides and stop motions may be equipped with porcelain inserts.

Thought should be given to the shape of guides. Long, tube-shaped guides offer too much contact surface and are difficult to clean. They should be avoided whenever possible. When a guide changes the direction of the yarn flow, it is wise to select an angle that will afford least resistance and will lead the yarn in the most direct route to the feed. A light contact on the guide prevents early grooving of the guide from the abrasive action of the swiftly moving yarn.

The drag stop-motion usually requires a rather abrupt direction change to insure proper function of the knock-off switch, but most other guides and motions lend themselves readily to the theory of "least resistance."

BALLOONING. Fluency of yarn flow may be aided by making sure that there is sufficient space for free ballooning from all cones. Yarn coming from cones placed too closely together may get tangled either momentarily or long enough to stop the machine. The final result in either case is poor; temporary drag may cause some tight stitches and inferior cloth; and if the machine is stopped, rethreading is necessary and production time is lost.

Photos courtesy Continental Mills, Inc., Philadelphia, Pa.

HANDLE IT, DON'T THROW IT is the training given to knitting-cone-handlers at Continental Mills.

Pliability of the yarn has an important effect on the tension settings. If a hard, wiry yarn must be knitted, tension must be increased to keep it under proper control; otherwise, its wildness may cause it to jump out of wheels and cause press-offs and smashes. The basic knitted fabric is composed of entwined loops formed by many curves; hard, stiff, high-twist yarns resist this curving and sometimes cause a torque effect that makes the fabric appear to lean in one direction. A certain amount of limpness is therefore desirable in most knitted outerwear yarns. If it is not present in the natural yarn, some measure should be taken to obtain it until the yarn has passed through the knitting process.

Steaming and treating with emulsion are the two methods most widely used to obtain yarn pliability. Steaming, in addition to setting the twist, adds a ballast of moisture that deadens the natural "bounce" of the fibers. If yarn is exceptionally wild, it is best to steam-treat it just before it is fed to the knitting machine.

EMULSION. The emulsion treatment retains its effectiveness longer than steaming, since the rate of evaporation is slower. Emulsion is applied usually during the winding process, although

OUTERWEAR MILL

(Continued from previous page)

both steam and emulsion applicators have been attached to knitting machines. A disadvantage to conditioning yarn on the machine is that it adds a burden to the knitting-machine operator. Many mills prefer to have the knitter responsible only for producing good fabric and maintaining his machine. Attention to conditioning devices diverts his attention too much from his primary task.

Both steam and emulsion treatments are most effective if the processing is kept flexible by controlling the amount of absorption to the need. Routine treatments often fall short of requirements, and careful watch on them should be maintained. Steam treatment is easily regulated by the length of time of exposure; speed of emulsion rolls on winding machines should be variable so that the emulsion treatment may also be adjusted to the individual yarn lot.

Choice of a good emulsion oil is important, for any oil that has a tendency to become gummy will make the yarn stick to the supply package. If gum rubs off the yarn onto guides, stop motions, and wheels, it will pick up and hold fugitive fibers. Sometimes the clogging is so serious that the usefulness of the part is lost.

Most mills stress care in the manual handling of yarns when new personnel is being trained. Informal refresher courses on the subject also pay dividends.

Most yarn damages from manual handling seem to occur after the yarn has been packaged. Before it has been put on cones or bobbins, it seems to be viewed as an unfinished product and as such is held in more respect. After it is wound, there is a tendency to let down and toss cones and bobbins from trucks to cases, etc.

This casual handling of yarn packages has many ill effects and causes the knitting-machine operator many headaches. In addition to cut strands that cause machines to stop, defects such as press-offs, underlaps, nicked or bent paper cones or bobbins, and matted yarn result.

Mills that pay close attention to the manner of manual handling usually tie in a program of inspection for all trucks, cases, bins, conveyors, etc. All yarn carriers and storage containers should be periodically checked for splinters, protruding nails, and other irregularities that could damage the yarn. Heavy paper liners may be used and changed often; they protect yarn from damage and also aid in keeping it clean.

YARN-STORAGE UNITS. There is a definite trend toward the use of mobile yarn-storage units. Metal bins on rollers have many advantages. If the design is suited to the need and physical characteristics of the mill, the yarn need be handled only twice after it leaves the winder: the first time when it is doffed from the winder and placed in the bin, and the second time when it is removed from the bin by the knitter.

If the yarn is not used immediately after it is wound, the mobile bin is rolled to the stock room until the yarn is needed. Uniform bins make a good-looking stock room and encourage good-housekeeping habits. Built-in yarn-ticket holders make identification easy and facilitate inventory taking. The cost of fabricated metal bins is rather high in comparison to second-hand wooden yarn cases, but the results seem to justify the extra expenditure.

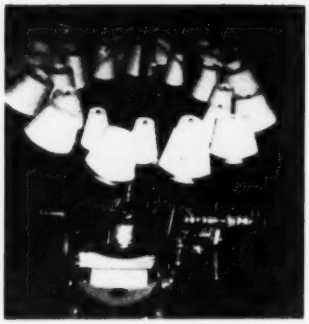
One medium-size mill that manufactures heavy outerwear fabric has a good system for handling and storing yarn mixes. Cards and spinning frames are teamed so that the roving from a specific card always is spun on the same spinning frame. The reason for teaming cards and frames is that any variations in the yarn caused by cards or frames will be kept within the same pieces of fabric and will provide a more level fabric surface than would be possible if contrasted with other physical yarn characteristics from other cards and frames.

The tops from the cards are kept separate from the bottoms. This separation is continued through all handling, and tops and bottoms are not intermixed in the fabric until one lot runs out. Thus, only a few rolls of cloth contain both tops and bottoms. Fabrics of better appearance and less spoilage result from this method.

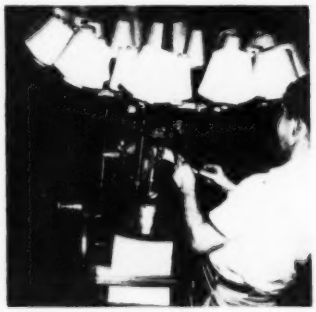
A foolproof yarn-lot identification system pays off in dollars and cents, but few mills ever work out a system that works perfectly. Mixed yarn accounts for a high percentage of spoilage in almost all outerwear mills.

One mill identifies various sizes of the same yarn by different color yarn tickets. The same color is always used for the same size of yarn. All personnel becomes accustomed to the sizes and related colors and is alert for errors. The same mill tints all natural yarns intended for piece dyes with a fugitive stain. The stain is washed out during fulling and scouring of the pieces.

Another mill maintains a rigid rule that the original yarn ticket must remain with the lot until the last cone or bobbin is used. If a ticket is needed for a special purpose, a copy is made; the original stays with the lot.—END.



YARN AND KNITTING PARTS are cleaned each 4 hr. with compressed air to avoid tension and yarn troubles.



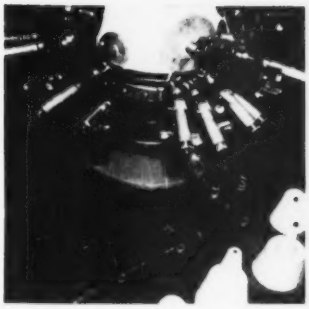
THREAD-UP AND KNOTTING with a short-tail weaver's knot can avoid many fabric defects.

QUALITY UNDERWEAR and sweatshirt fabrics must begin with good, clean, properly wound yarn and proper care of the yarn through each step of processing, storage, and handling. Any variation in the yarn itself or in the way it is used or treated will show up in the final knitted product.

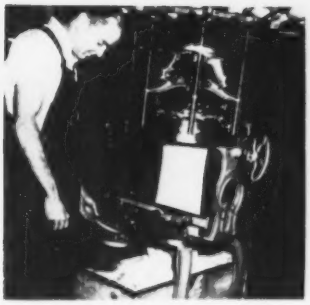
These factors receive careful attention at Griffin Knitting Mills, Griffin, Ga., manufacturers of knitted underwear fabrics and fleece-lined cloth for sweat shirts.

Yarn is purchased in quantities to meet weekly production schedules. While conditioning and long-term storage do not present particular problems, yarn that remains in the mill for more than two weeks is stored for reconditioning in the above-ground basement where there is relatively high humidity from the bleaching and dyeing operations.

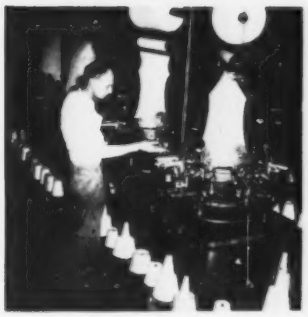
Special attention is given to the selection of yarn and yarn combinations to produce the necessary variety of garment weights. Since cotton texture and quality vary with different cotton varieties, growing areas, and growing conditions, weight fluctua-



BALLOONING YARN can usually be avoided by careful placing of cone directly under yarn guide.



TAKE-UP-ROLL TENSION is adjusted for each weight of fabric to insure uniform knitting.



BURRS AND CLOGGED GUIDES on the machines knitting fleece fabrics are kept free of lint by regular blowing.

UNDERWEAR KNITTER

Emphasizes Yarn and Feeding

HIGHLIGHTS: *Fabric weight is controlled at Griffin Knitting Mills by selection of yarn—Cotton variety, growth area, and conditions influence selection—Clean yarn and machines in good repair keynote mill's quality-control program.*

Good HANDLING OF YARN Pays

By E. DALTON WHITE
McGraw-Hill Atlanta Bureau

tions in knitting and finishing and differences in color and uniformity in dyeing can be controlled only by the use of yarn that will respond as desired.

YARN TESTS. Periodic yarn tests are made to maintain standards of weight and quality. These tests are in addition to checks on the weight of material from the knitting machines and comparisons with weight of the finished product.

Griffin has found that it is not unusual to experience a loss of three-fourths of one per cent in yarn during knitting. This loss will vary depending upon the length of the cotton staple, cleanliness of the yarn, and knitting efficiency.

Another type of yarn loss comes from damage to cones during handling. As a precaution against chafing and snagging of yarn from the time it is received until it is placed on the machine, the mill does not shuck the paper from the cones until the cones are actually being placed on the knitting machine.

Tension and yarn troubles that develop from clogged guides and failure to keep cones and machines free from lint are avoided by good cleaning and the use of stop motions. Each machine is cleaned by compressed air each 4 hr.

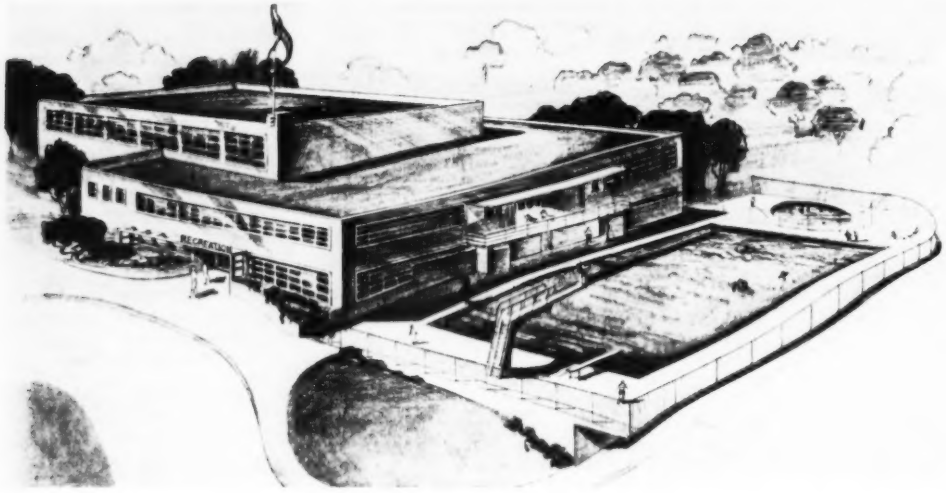
Bent needles, crooked or worn latches, and improperly tied knots are other causes of defective knitting that are closely watched. Regular needle inspection and replacement, when necessary, are routine practices at Griffin to insure uniform knitting. Tight weaver's knots, with the loose ends pinched close, are used.

The mill uses a total of 97 knitting machines: 35 Scott & Williams, 34 Tompkins, 20 Nye & Tredick, and 8 Wildman. The Scott & Williams latch-needle circular machines are used for knitting underwear and the cuffs and tails for sweat shirts. Tompkins spring-needle machines produce fleece cloth for the sweat shirts.

YARNS USED. In producing underwear, the mill uses 12s to 26s yarn. For the fleece cloth, three types of yarn are used: 22s for facing, 26s for the tie-ins, and 12s for backing for the double-plush material. Carded single yarns are used in all production.

All cloth is knitted with 27 stitches to the inch, and usually another one to two stitches are gained per inch during bleaching, dyeing, and finishing. Weight of cloth is controlled by varying the size of the yarn used, rather than by a change in the number of stitches. The mill finds that it is more advantageous to use a slightly larger head to prevent distortion or spreading of the stitch in the finished material. This control method gives a good hand and greater uniformity in the cloth, since it prevents an elongated stitch that would tend to return to normal as knit, causing shrinkage.

Although the knitters maintain constant check on quality of knitting during production of materials, the mill makes a final check before the goods are sent to the finishing department. The knit goods are removed from the machines in 50-lb. rolls and are inspected for defects during re-rolling. The cloth passes over lights to show up imperfections. Defects are recorded and causes determined and analyzed.



Value of RECREATION Recognized by Dover Mills

HIGHLIGHTS: *Recreation center being built in Shelby, N. C.—Two-story main building has swimming pool, gymnasium—Facilities provide all-day, year-round program for all ages and groups—Management feels recreation planning is good business.*

By EARLE MAULDIN
Southern Editor, TEXTILE WORLD

REALIZING THE VALUE of a recreation program and recreational facilities for employees, J. R. Dover, Jr., president of the Dover Mill group, Shelby, N. C., recently announced a program for construction of a recreation center. Included are a large recreation building, a swimming pool, playground, tennis courts, and a softball diamond. The planning has been done and construction started.

The entire recreational center is located midway between the two principal mills of the group, Ora and Dover. Families of the other mills of the Dover group which are located relatively nearby will be able to take advantage of the facilities of the center.

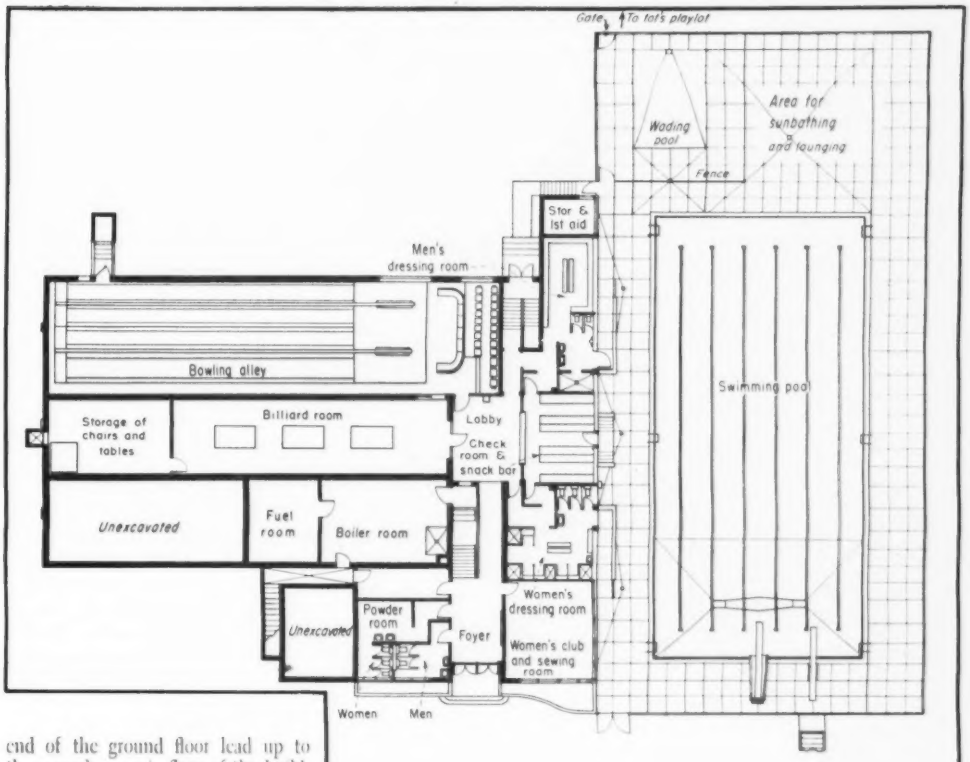
The swimming pool will be 45x90 ft. with a special wading pool 16x20 ft. located at one end. This wading pool for small tots will be separated from the swimming pool by a fence and gate, for the safety of the children. The main swimming pool will be of standard depth with 75% of the area less than 5 ft deep for the convenience of the usual large number of non-swimmers. Equipment of the pool will include a one-meter board and a three-meter diving tower of unique cantilever construction. The filter equipment will consist of the most modern water-treating apparatus including diatomaceous filters and chlorinators to insure the pool being kept in an attractive and healthful condition at all times. Adequate overhead and under-water lighting will be installed to promote and facilitate night use. The pool and the 12-ft. walk around its borders will be inclosed by a chain-link fence 6 ft. high. The only access to the pool will be through the bath house which is located on the ground floor of the recreation building. Seats for spectators will be provided alongside the pool and outside the inclosure.

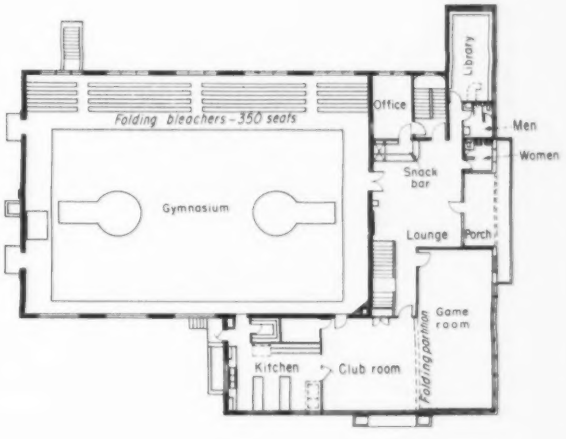
The recreation building with a floor space of 17,000 sq. ft. has unique design and is well fitted to its hillside location. The main entrance, located on the ground floor, leads directly into the lobby. Adjoining the lobby are the basket check room and the men's and women's dressing rooms; also a four-lane bowling alley with the most modern equipment; a billiard room, and women's sewing and special-project rooms.

The dressing rooms are designed to make the maximum use of the available space, partly by the use of the basket system of checking. This reduces necessary space 50 to 75%. Hot showers will be available, since the dressing rooms will serve basketball and other teams throughout the year. The showers will also be available at all times for all employees and their families. At the counter space of the check room will be a snack bar.

GYMNASIUM. Flights of stairs at each

FACILITIES PROVIDE FOR ALL AGES, ALL GROUPS, AT ALL TIMES





end of the ground floor lead up to the second, or main floor of the building. The gymnasium on this floor is 60x87 ft. providing adequate space for a 42x74-ft. official-size basketball court. There is bleacher space for 500 spectators.

The gymnasium will also be adaptable to many other activities such as volley ball, badminton, paddle tennis, boxing, wrestling, and will be used for various religious and social activities such as parties, banquets, dances, family nights, movies, musicals, etc. Dramatic presentations can be staged by the addition of a portable platform. A hoisting arrangement at one side of the floor will provide means for utilizing storage space on the lower floor for tables and chairs.

The office of the recreation director and staff will adjoin the gymnasium and lounge. A second snack bar will be provided in the lounge for serving cold drinks and packaged foods.

A small library, which will also be used as a club meeting room, is in one wing of the main floor. In the other wing is the game room, the regular club meeting room, and storage space.

The game room is of adequate size

(Continued on page 240)

Cotton Mill Builds Larger YARN PACKAGES

HIGHLIGHTS: *Tallassee Mills of Mt. Vernon-Woodberry Mills, Inc., changes from 10-in. bobbins, 2½-in. rings to 12-in. bobbins, 2¾-in. rings on 9s to 15s — 5,196 spindles have 10-in. bobbins, 3-in. rings on 6s to 10s — 20,064 spindles showed yarn-per-bobbin increase of 54.28%.*

By L. D. SAYERS
Superintendent of Maintenance
Tallassee Mills, Tallassee, Ala.

***SPINNING BOBBINS** have been increased in length from 10 in. to 12 in. and in diameter from 2½ in. to 2¾ in. Tapered paper tubes are used.*

LARGE-PACKAGE SPINNING is always a relative subject, and it is not the intention of the Tallassee Mills to compare the following description of package and other improvements at the Tallassee, Ala., plant of the Mt. Vernon-Woodberry Mills, Inc., with what could or should be done at other mills. The size of spinning packages depends upon stock run, the condition of equipment generally, and upon the limitations of the frame sizes and gages.

Obviously, a mill that goes from a 1-in. ring to a 2-in. ring is entitled to believe that, comparatively speaking, it has changed to large- or larger-package spinning. The maximum change, therefore, at Tallassee Mills from 10-in., 2½-in.-ring bobbins to 12-in. 2¾-in.-ring bobbins on certain warp numbers represents another relative change that, if it does not pretend to be an unusual one, certainly is one that brought a considerable improvement in the spinning room.

The Tallassee Mill has a total of 82,752 spindles of Saco-Lowell long-draft spinning frames that range in gage from 2¾-in. (and 1¾-in. ring diameter) to 5-in. gage (and 3-in. ring diameter). Filling numbers spun on the larger rings are, of course, rewound on automatic quillers.

Bobbin lengths are: 8¾-in. quills on all filling spinning, 10-in. and 12-in. tapered paper tubes on warp yarns. Rovings for yarn numbers 2.50s through 19s are 0.50, 0.92, and 1.25 hank. Generally, 1-in. cotton stock is used for chafer fabrics, industrial sheetings, awnings, enameling ducks, drills, twills, and moleskins.

All spinning spindles (filling) are conventional clutch type, and warp spinning spindles are a mixture of conventional and tapered wooden-sleeve spindles with both roller and ball bearings. Spinning frames are equipped with ball-bearing tape-tension pulleys and ball-bearing cylinders. Cylinders are 8 in. and 10 in. in diameter, and the spindles are tape driven.

Front-roll speeds range from 128 rpm. on 19s warp to 235 rpm. on 2.85s warp, and the speeds for filling numbers vary about the same. Spindle speeds range roughly from 3,200 rpm. on 1¼-in.-ring filling with a traveler speed of 1,256 fpm., to 8,828 rpm. on 2¼-in.-ring, 19s warp yarn, with a traveler speed of 5,200 fpm. The spindle speed on 2¾-in. ring, 15s warp yarn, is 8,160 rpm., with a traveler speed of 5,875 fpm.

TECHNICAL CHANGES. The remainder of the article will be devoted to a description of the various frame groups with some before-and-after details.

Seventy-six frames are 4-in. gage, with 264 spindles per frame, and doff 12-in. bobbins from 2¾-in. rings. These 20,064 spindles were formerly equipped with 2¼-in.-diameter rings and 10-in. tapered paper tubes, but were converted about two years ago to the 2¾-in. rings and 12-in. tapered paper tubes.

Tables given condense all the pertinent data with representative yarn numbers before and after changes.

Twenty-three frames (5,196 spindles) have 3-in. rings on 4¼-in. and 5-in. gages and were changes from 2½-in. rings as shown in the "BEFORE" data of Table I. The details of the "AFTER" data from these 23 frames are tabulated in Table II.

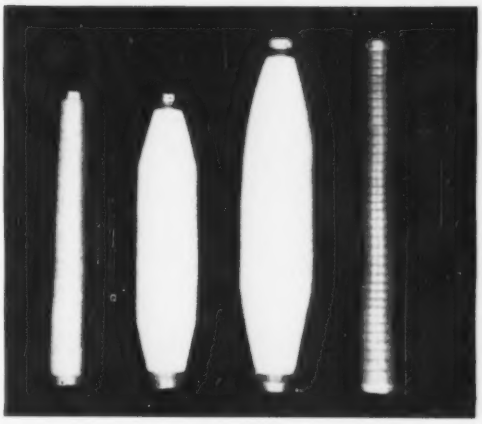
A group of 90 frames which are 3½-in. gage, with 228 spindles per frame, and have 2¼-in. rings were converted several months ago from 8-in. wooden bobbins to 10-in. tapered paper tubes. In addition to the increase of approximately 28% in package size, this change produced an increase in spindle speeds of about 5% as a result of a simultaneous installation of new ball-bearing spindles. The "BEFORE" and "AFTER" of these changes are shown in Table III.

Since all filling spinning has been on 8¾-in. quills for a number of years, comparative technical data is not available.

However, practically all single counts of 5s and coarser are spun on warp-spinning frames and quilled on automatic quillers. The 8¾-in. quill has 52.2% more filling from the automatic quiller than from the filling spinning frame. The yarn content of the frame quill (1½-in. ring) is 0.080 lb., while that of the automatic quiller is 0.137 lb.

TABLE I

	BEFORE (10-in. bobbins, 2½-in. rings) Yarn Numbers				AFTER (12-in., 2¾-in. rings) Yarn Numbers			
	9.25	10.50	13.50	15.00	9.25	10.50	13.50	15.00
Rpm. front roll (1 in.)	178	168	156	139	178	168	156	139
Rpm. spindle	7,728	7,728	8,160	8,160	7,728	7,728	8,160	8,160
Fpm. traveler	5,054	5,054	5,337	5,337	5,564	5,564	5,875	5,875
Traveler size	11	10	8	6	12	11	10	9
Running time/ doff (hr.)	3.66	4.33	6	7.5	5.75	6.75	9.5	12
Twist multiplier	4.50	4.50	4.50	4.75	4.50	4.50	4.50	4.75
Hank roving	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Oz./bobbin (wet yarn)	7.0	7.0	7.0	7.0	10.8	10.8	10.8	10.8
Increase yarn/ bobbin					54.28%			
Type spindle	Conventional wood top No. 6				⅔ roller bearing, ⅓ ball bearing.			
Whorl diameter	1 3/16 in.				1 3/16 in., and 1⅛ in.			
Cylinder diameter	10 in.				10 in.			
Rpm. cylinder	1,020				1,020			
Build	Combination				Combination			
Cam	3-in-1 non-sloughing				3-in-1 non-sloughing			
Traverse	9 in.				12 in.			
Stroke	6½ in.				8¼ in.			
Taper	2½ in.				2¾ in.			
Type ring	Curved web, No. 2 flange.				Curved web, No. 2 flange.			

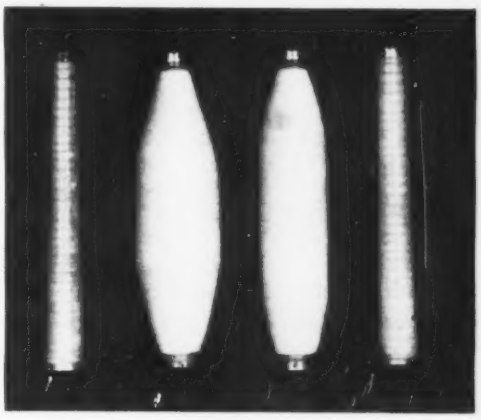


BOBBIN LENGTHS AND DIAMETERS were increased on 76 frames for a yarn gain of over 50%.

TABLE II

AFTER
(10-in. bobbins, 3-in. rings)

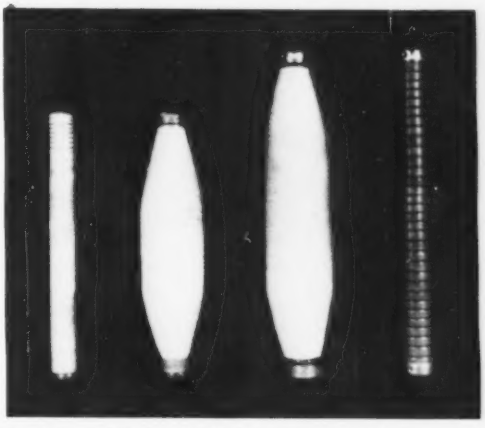
	Yarn Numbers				
	6.00	7.00	8.00	9.25	10.50
Rpm. front roll (1 in.)	210	196	187	178	168
Rpm. spindle	7,232	7,232	7,456	7,728	7,728
Fpm. traveler	5,677	5,677	5,853	6,066	6,066
Traveler size	14	13	12	10	9
Running time doff (hr.)	3	3.5	4.5	5.5	6
Hank roving	0.92	0.92	0.92	0.92	0.92
Twist multiplier	4.50	4.50	4.50	4.50	4.50
Oz./bobbin (net yarn)	9.6 approx.				
Type & length bobbin	10-in. tapered paper tube				
Type spindle	Conventional wood top No. 6				
Whorl diameter	1 3/16 in.				
Cylinder diameter	10 in.				
Build	Combination				
Cam	3-in-1 non-sloughing				
Traverse	9 in.				
Stroke	6¼ in.				
Taper	2¾ in.				
Type ring	Curved web, No. 2 flange				



DIAMETER CHANGE ONLY was made on 23 frames. See Table I for details BEFORE changing.

TABLE III

	BEFORE (8-in. wood bobbin 2¼-in. rings) Yarn Numbers			AFTER (10-in. paper bobbin, 2¼-in. rings) Yarn Numbers		
	15.00	17.00	19.00	15.00	17.00	19.00
Rpm. front roll (1 in.)	147	141	122	154	148	128
Rpm. spindle	8,400	8,400	8,400	8,843	8,843	8,843
Fpm. traveler	4,940			5,200		
Running time doff (hr.)	4.66	5.50	7.50	6.16	7.28	9.33
Hank roving	1.25			1.25		
Twist multiplier	4.75			4.75		
Oz./bobbin (net yarn)	4.60			6.00		
Type spindle	Conventional			Ball bearing		
Whorl diameter	1¼ in.			1 1/16 in.		
Cylinder diameter	8 in.			8 in.		
Build	Combination			Combination		
Cam	3-in-1 non-sloughing			3-in-1 non-sloughing		
Traverse	7 in.			9 in.		
Stroke	4.75 in.			6.75 in.		
Taper	2¼ in.			2¼ in.		
Type ring	Curved web			Curved web		



A 28% INCREASE in yarn content resulted from the changes listed here; 90 frames were involved.

At Bachmann Uxbridge Worsted—

More FOOT-CANDLES Mean More Production

HIGHLIGHTS: *Tests trace efficiency increases in weaving and spinning and decreases in bad yarn and cloth rejects to higher light intensities—Lighting custom-designed for many individual processes—Maintenance program holds illumination efficiency at peak.*

By WILLIAM A. NEWELL
Assistant Editor, TEXTILE WORLD

CONTROLLED TESTS made by Bachmann Uxbridge Worsted Corp., Uxbridge, Mass., show definite improvement in weaving and spinning efficiencies with increases in foot-candles. There are simultaneous decreases in bad yarn and finished-fabric rejects. During the tests, machines, material, and workers remained the same.

Increases in efficiency throughout the plant are attributable as well to custom-designed supplementary-lighting installations at points where more difficult seeing tasks called for greater intensities than provided by the general-illumination scheme. Peak efficiencies are maintained by systematic maintenance of lighting to keep the output of all bulbs and fixtures at maximum levels.

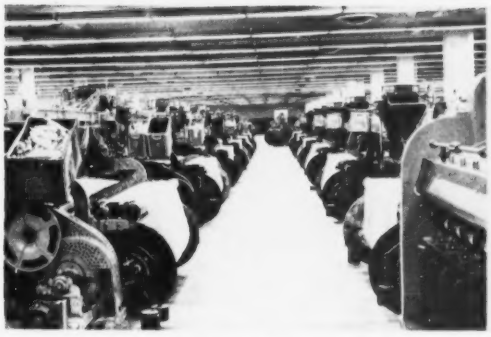
Average percent increases in weaving efficiency and yarn production, and decreases in mending costs, bad yarn, and rejects of finished cloth which occurred with improvements in light intensities are charted on the opposite page. Some individual test results are shown in the table at the immediate left.

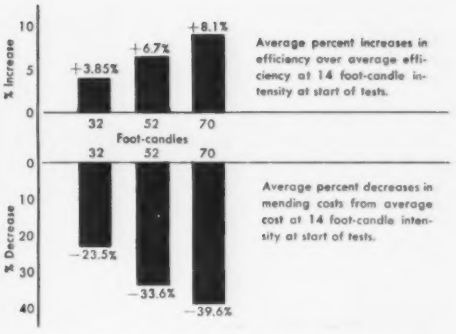
Effect of Increased Foot-Candles on Weaving Efficiency and Mending Costs
Same looms, same weavers, same conditions

Type fabric	Weaving efficiency percent at various foot-candles				Percent increase in weaving efficiency	Percent decrease in mending costs
	19-17 incandescent	32 fluorescent	52 fluorescent	70 fluorescent		
Automobile cloth, worsted warp, wool filling	81.0	84.0			3.0	22.0
Automobile cloth No. 2, worsted warp, wool filling	83.0	87.7			4.7	25.0
Dress goods, wool warp and filling		66.5	69.0		2.5	12.5
Men's wear, cotton warp, wool filling		78.3	81.5		3.2	14.0
Automobile cloth, worsted warp, wool filling			82.4	83.8	1.4	9.0

Effect on Yarn Production and Bad Yarn of Change From 11 to 42 Foot-Candles

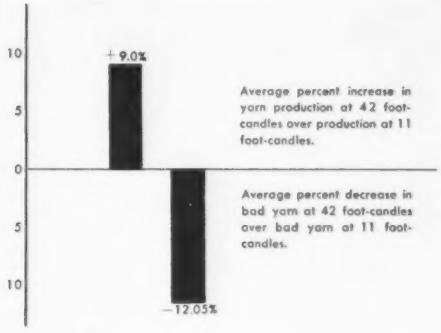
Type yarn	Percent increase in production	Percent decrease in bad yarn
Wool 1 1/2 run	9.6	11.5
Wool 2 1/2 run	8.4	12.6





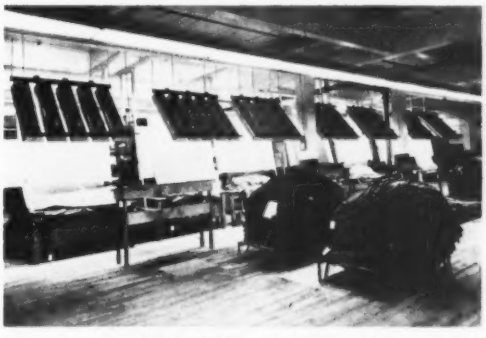
WEAVING: Efficiency increased, mending cost decreased with each rise in lighting.

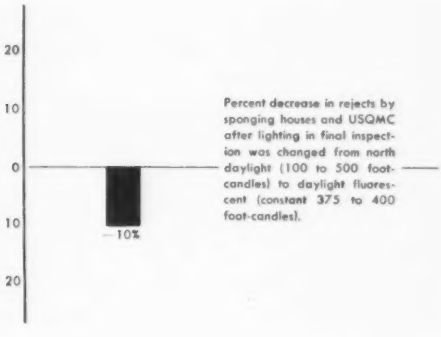
In a series of tests in which all factors were under control, increases in foot-candles in three stages from 14 to 70 progressively showed increases in production and decreases in mending costs. The former raised weaver's wages, the latter decreased company operating costs.


10
5
0
5
10
+9.0%
−12.05%
Average percent increase in yarn production at 42 foot-candles over production at 11 foot-candles.
Average percent decrease in bad yarn at 42 foot-candles over bad yarn at 11 foot-candles.

SPINNING: Production up 9.0%, bad yarn down 12.05%.

Tests on 1½- and 2½-run wool-yarn spinning under 11 foot-candles incandescent and 42 foot-candles fluorescent produced the above average increase in production and decrecse in bad yarn.




20
10
0
10
20
−10%
Percent decrease in rejects by sponging houses and USQMC after lighting in final inspection was changed from north daylight (100 to 500 foot-candles) to daylight fluorescent (constant 375 to 400 foot-candles).

FINAL INSPECTION: Rejects down 10%.

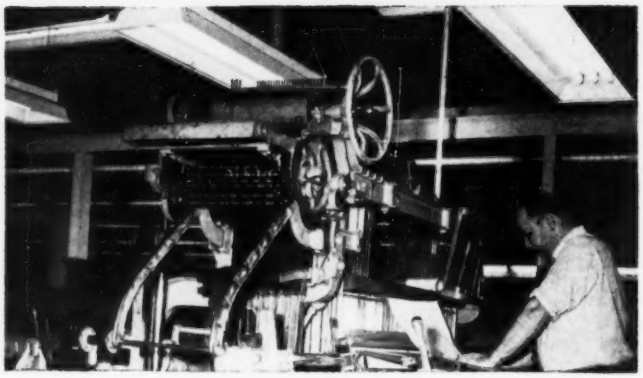
Random tests on daylight formerly used showed variations from 100 to 500 foot-candles. An Uxbridge-designed fixture (see next page) casting uniform 375 to 400 foot-candles on fabric resulted in 10% less rejects by New York sponging houses and U. S. Army Quartermaster Corps.

FOR SPECIFIC INSTALLATION DATA, TURN THE PAGE

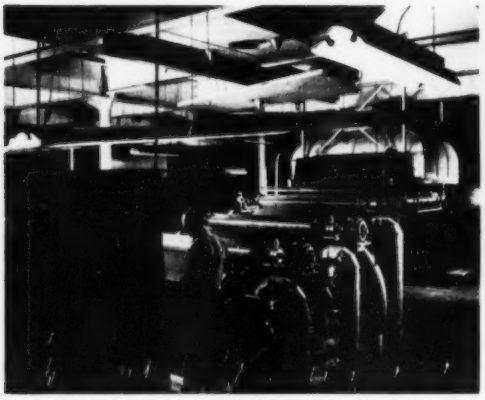
Custom-Designed Supplementary Lighting Features Uxbridge Installation

☆

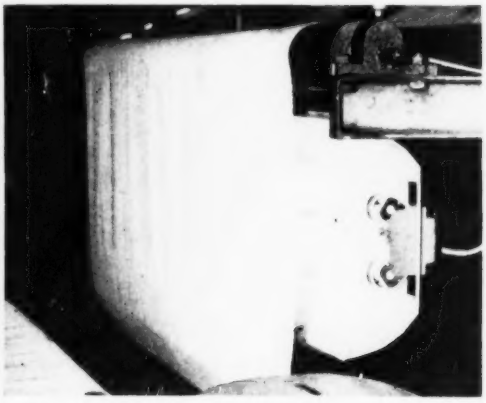
Where individual processes call for seeing tasks at points not sufficiently illuminated by the general lighting, supplementary lighting custom-designed to each situation has been installed. In these cases, special care was devoted to the geometry of the installation to provide extra foot-candles evenly and to prevent shadows from being cast on the process by the operator.

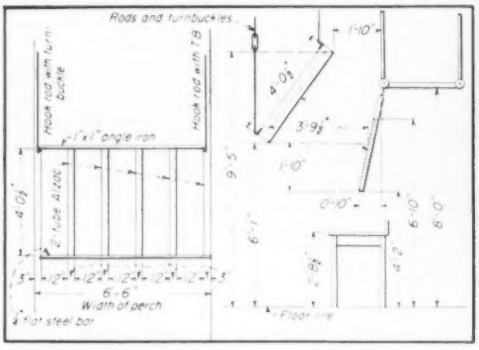


SAMPLE LOOMS weave sample blankets which call for extra care in drawing-in, selecting colors, etc. General lighting casts 50 foot-candles on warp. Two extra units, each holding three 40-w. daylight tubes, are mounted over beam side and cloth side and cast 100 foot-candles on warp yarns and fabric.

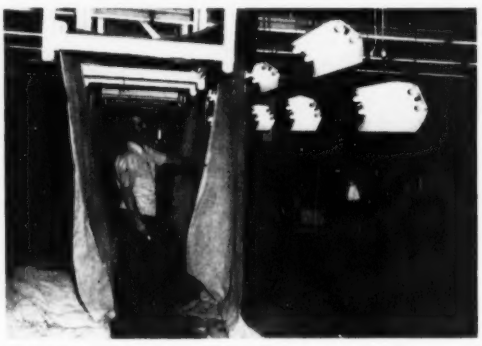


FINISHING-ROOM MACHINES, as shears, pressers, etc., all have localized machine lighting. Shears, for instance, are lighted by two continuous rows of four closed-end reflectors mounted above and parallel to the length of the machine. Light intensity at working level is 60 foot-candles. Presser has fixture mounted behind the fabric to show up defects. To save current when only a few machines are operating, lights over individual machines are controlled by individual switches.

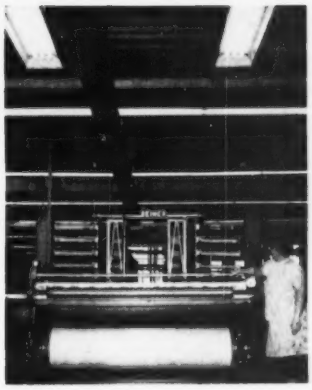




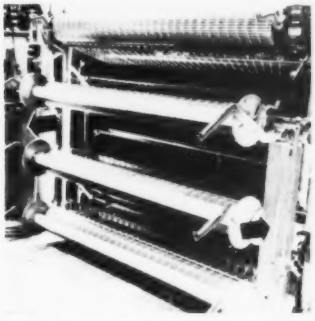
FINISHED-GOODS PERCH is lighted by 375 to 400 foot-candles cast by five Alzac reflectors each holding two 40-w. daylight tubes. (See picture on page 111.) Tubes are changed each 800 hr. Installation insures that light is reflected from fabric below eye level.



WEAVE-ROOM PERCH has two supplementary-lighting fixtures each containing two 60-in., 100-w. fluorescent tubes. Intensity on fabric is 200 foot-candles. Reflectors are mounted so that light is reflected below eye level.



WARPER operator has a most difficult seeing task at the warper head. Two units each holding three 40-w. tubes are mounted at right angles to the warper head to prevent shadows and to raise light intensity on the reed to 75 foot-candles.



TAPE CONDENSER has special fixtures designed to throw 70 foot-candles of light into the condenser aprons. One 36-in., 30-w. fluorescent tube is mounted at each side of the condenser (see arrows). Reflectors can be raised or lowered on portable mounts.

Efficient Maintenance System Keeps Lighting Levels Up To Standard

The average industrial installation of fluorescent lights has about 26% of the tubes either failing or completely out, according to a recent survey made by a light manufacturer. In his tour at Bachmann Uxbridge Worsted Corp., one of TEXTILE WORLD'S editors purposely looked for tubes out or failing. Not a single such tube was found. The reason: A well-planned and executed maintenance program.

Twice during each 24 hr., a one-man patrol checks all tubes. This man, pushing his specially designed wagon (see cut at right), replaces defective tubes and starters. More serious troubles are reported by the team to the shop electrician.

Periodic cleaning of tubes and reflectors depends on conditions in individual departments. In departments where there is much fly, as in the card room and near the shears, reflectors are blown out each 8 hr., are wiped off weekly, and twice yearly are thoroughly washed off with Collinite, a dry-cleaning fluid said to be most suitable for this purpose.

In all other departments, reflectors are wiped weekly and are washed with Collinite three times yearly.

The tops of all fixtures are painted white as an incentive to keeping them clean.

LIGHTING DETAILS BY DEPARTMENT

CARDING—

General lighting provides 40 foot-candles at working level. Two 60-in., 100-w. fluorescent tubes in fixtures 9 ft. apart run parallel to cards with 11 ft. between rows, and are 10 ft. 9 in. above floor. See illustration above for details of custom lighting on condenser.

SPINNING—

Mules and frames have general lighting which provides 40 foot-candles at working level. Fixtures are continuous, deep troffer, spaced 6½ ft. on centers, 10 ft. high, and hold single 40-w. fluorescent lamps. Fixtures are mounted over alleys to prevent casting of shadows by separators.

WEAVING—

Continuous rows of closed-end reflectors containing two 40-w. fluorescent tubes throw 70 foot-candles on the fabric. Space between rows is 8 ft.; height is 9½ ft. Mounting of fixtures perpendicular to direction of lay prevents glare when weavers look down rows of looms and prevents shadows on looms. See opposite page for custom lighting of sample looms.

MENDING AND SEWING—

General lighting is provided by continuous rows. Over storage areas and aisles, intensity is 35 foot-candles; fixtures are 9½ ft. high. Over tables, continuous rows of closed-end reflectors 6 ft. 9 in. apart, holding two 40-w. fluorescent tubes, provide 125 foot-candles at sewing point 27 in. above floor.

DRESSING—

General lighting of 35 foot-candles at working level is provided by two 40-w. fluorescent tubes in fixtures 11 ft. apart, 9½ ft. high. Individual fixtures holding two 40-w. tubes provide 75 foot-candles at the reed.

DYEING AND FINISHING—

General lighting provides 35 foot-candles throughout. Incandescent lights are mounted in dye kettles in vapor-proof units. Interior of dryers is illuminated by 150-w. incandescent floodlights with silver reflectors inside bulbs.

ALBION TERRACE development so far has 18 single and four duplex homes.

What One Mill Did About HOUSING

HIGHLIGHTS: *One- and two-family houses erected near plant at Albion, R. I., by Berkshire Fine Spinning Associates—Sale restricted to workers or prospective employees—Single units of 5½ rooms sold for $8,850—Mortgages carried by company.*

By CHARLES H. LEACH

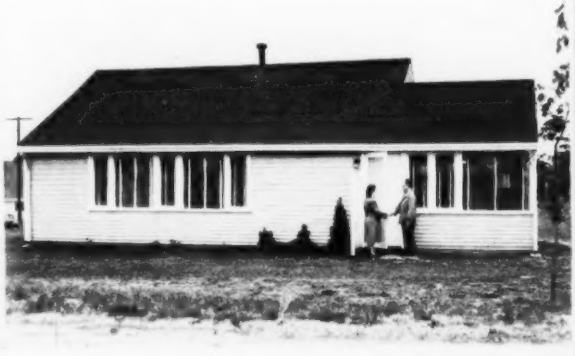
Berkshire Fine Spinning Associates, Inc. is presenting concrete proof to employees at Albion, R. I., that here is one employer that does not contemplate a migration southward. Berkshire has recently built and offered for sale a new community consisting of 18 single and four duplex houses. These are to be sold only to the personnel of the Berkshire Valley Falls Div. plant at Albion or to other skilled textile workers who wish to make their homes there and who will take employment at the Albion mill.

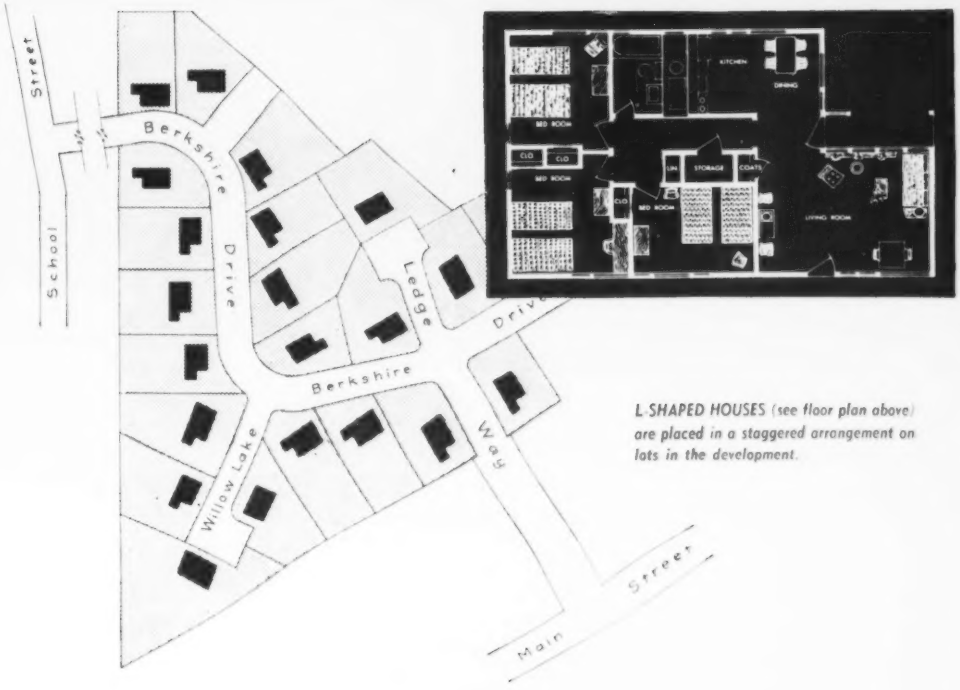
Within a few weeks after the sale was announced, two of the single units were purchased by local families—Joseph Edward Couture, a yard-crew foreman, and Adelard and Eva Desjardins, weavers. Both families have over 20 years service with Berkshire. They regard the opportunity to own their homes under the Berkshire plan as a reward for their years of loyal service. Both men are World War II veterans and reflect the faith in the future that the company shows.

Albion Terrace, as the new com-

The Desjardins at Home

First Albion Terrace home was bought by Adelard and Eva Desjardins, both weavers with 20 years of service with Berkshire. The design of the outside trim of the houses was kept simple to reduce cost of upkeep. Each home has a surfaced parking strip and enough land for a garage and a garden. Heat is oil-fired and thermostatically controlled; houses are insulated.





L-SHAPED HOUSES (see floor plan above) are placed in a staggered arrangement on lots in the development.

munity is called, is a high, fertile, well-drained tract of land one block from the town's through highway. The plot is adjacent to the village school and the athletic field. The company surveyed, sewered, and graded the tract, installed water mains and fire hydrants, and built a filtration plant. Electricity is supplied by the Blackstone Valley Gas & Electric Co. Cost of laying out and improving the tract was $10,000.

All one-family dwellings are L-shaped, have gable roofs, and are finished with plain, easy-to-paint molding at the gable ends. Foundations are of reinforced-concrete slabs and are insulated from ground heat, cold, and moisture.

There are no cellars because the modern heating units used in these houses are compact and efficient. They are installed in a space no larger than a fair-size clothes closet. By setting a button switch to winter or summer position, the unit will start a gentle, no-draft circulation of warmed or cooled air through vents in every room. The units are oil-fired; and the estimated cost of heating these snug, thoroughly insulated homes is between $90 and $100 yearly. A 550-gal. underground tank furnished with every home is filled with fuel oil when the buyer moves in. An automatic gas hot-water heater with a 30-gal. copper tank is provided. All piping is copper or brass.

Floors are surfaced with asphalt tile over a cushion of insulating material and are a mottled graphite-gray.

Each bathroom has a 4-ft. waterproofed Sheetrock wainscoating, flush toilet, built-in tub with shower and curtain, lavatory, towel rack, and a glass-doored medicine cabinet with fluorescent light.

The 13½ x 8-ft. combination kitchen

(*Continued on page 242*)

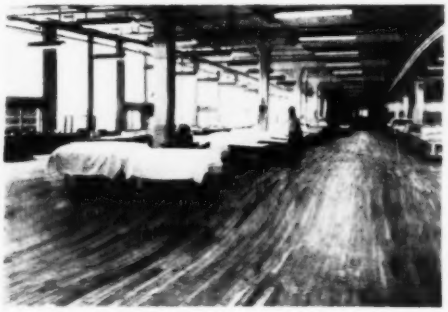
RECONDITIONING

NEW FLOORS FROM OLD—

Bates Mfg. Co. Style

MAINTENANCE

1 FLOORS WERE SANDED to remove dark, spongy, topwood fibers. In the spinning room, a steel cutting tool was used to remove travelers sunk into floor. This tool was also used in areas that were especially bad.



5 DAILY MAINTENANCE consists of two sweepings with dry, cotton, push-type mops, 48 in. wide. Soilage does not cling to hardened surface, is easily removed. Mops help prevent oil spots from discoloring floor.

Bates Restores Thirty-Year-Old FLOORS

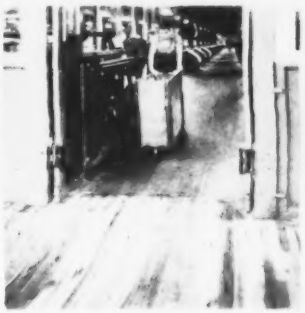
HIGHLIGHTS: *Floors reconditioned by mechanical process resistant to penetration—Maintenance is by dry cotton mops and steel wool—Mechanical sweeper has many uses throughout mill.*

BRIGHT, DURABLE FLOORS that resist dirt penetration and are easier to clean are the result of the floor-reconditioning and maintenance techniques used by the Bates Div. of Bates Mfg. Co., Lewiston, Me.

Chief feature of Bates new floor-maintenance system is use of a mechanized dry-cleaning process and elimination of scrubbing. The process provides for reconditioning and restoration of old, rough-surfaced floors, followed by a protective treatment that seals, binds, and hardens wood fibers to resist penetration and traffic wear.

A much smoother floor surface than before is provided—reducing the tendency of the floor to catch and hold lint, dust, and dirt. Only daily maintenance care now needed is rapid sweeping with a dry cotton mop. At longer intervals, floor brightness is restored by buffing with a steel-wool roll on a floor machine. About once a year, Bates expects to retreat the floors

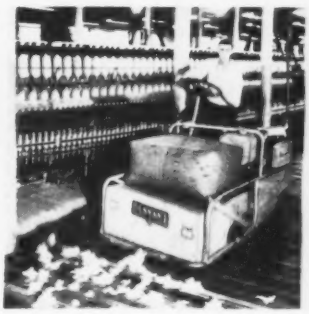
2 A PENETRATING SEAL was applied after sanding to give floors a hard, resistant finish. Buffing (above) followed sealing to remove "whiskers"



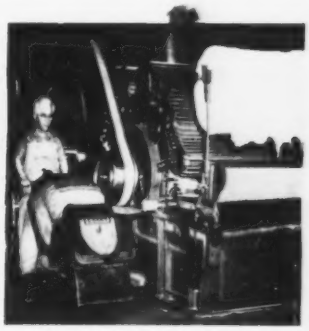
3 SEALED FLOOR in the foreground can be contrasted with an area in the background which has a surface-type finish. The comparison sold Bates on sealing floors.

4 OIL UNDER MACHINES was covered by a lacquer applied directly over the oily surface as under the frame at the left. Floor under frame at right is unpainted.

6 DISCOLORATION IS PREVENTED by sweeping as mops help remove oil spots. Accumulated lint is pushed into aisle where it is picked up mechanically.



7 A POWER SWEEPER picks up accumulated lint and debris from aisles twice daily. Waste shown on floor was put there for demonstration purposes.



8 AT LONGER INTERVALS, floors may be rebuffed by steel-wool cylinder in power machine. Low contour of unit permits it to fit under card-cylinder pulley.

to maintain hardness and durability.

As a mill concentrating on consumer products of high quality, Bates must insist on utmost cleanliness in manufacturing operations. Cleaner floors were considered an essential link in the mechanics of fine-fabric production. Likewise, Bates felt it advisable to abandon scrubbing in favor of a better method for reasons of maintenance expense, safety, and morale.

The new floor-cleaning method, the Tennant system offered by G. H. Tennant Co., Minneapolis, Minn., was first adopted a year ago on a trial basis to observe results. Today the technique is followed in maintenance of about 60% of the mill's wood-floor area (1,300,000 sq. ft.). Success of the project has been so noticeable that Bates plans to extend it as fast as possible, ultimately covering close to 100% of the maintainable floor space. The floor program is part of an extensive plant-wide modernization plan instituted by the company.

Based on its experience with the new floor-maintenance program to date, Bates has noted these advantages:

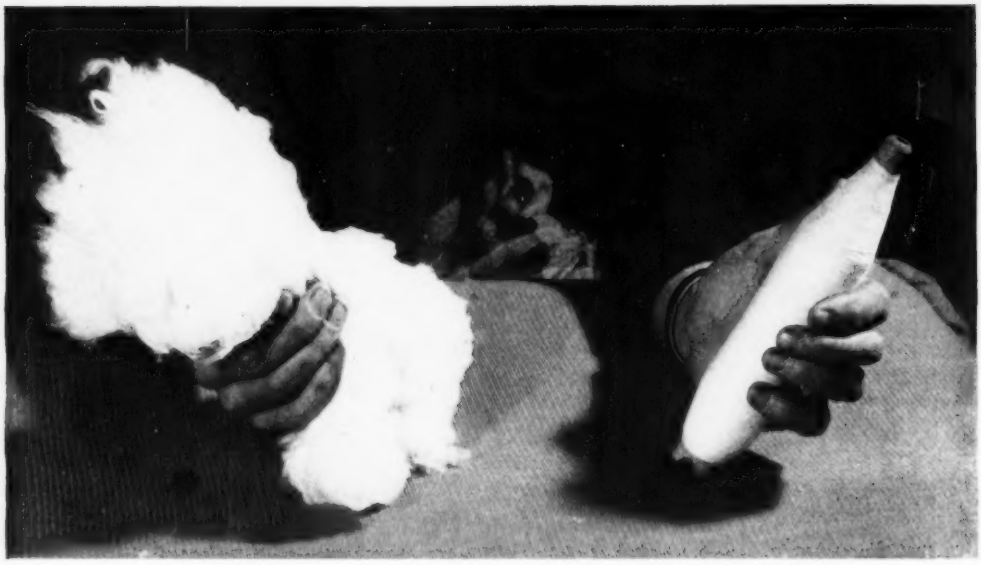
1. Increased ease of floor cleaning.
2. Added resistance to discoloration and dirt penetration.
3. Improved durability. Floor surface holds up well under mechanized trucking, does not easily crush or break down.
4. Avoidance of floor repairs and replacements.
5. Elimination of wet scrubbed floors and attendant slipping hazards.
6. Improvement of light reflection and working conditions.
7. Prolonged floor life, with reduction in fungi growths that result from moist conditions.

FLOORS CHECKED. In tackling the job of setting up a floor-maintenance program, Bates, in cooperation with textile-floor-maintenance experts, made a careful inspection of floors in different departments. All floors are of top-nailed maple with an average age of 25 to 30 years.

The checkup disclosed floor conditions that needed early attention.

(Continued on page 248)

Based on information supplied to TEXTILE WORLD *by an official of Bates Mfg. Co., Lewiston, Me.*



You Can Use FIBER TESTS To Bolster Yarn Strength

HIGHLIGHTS: *Carded 30s warp yarn broke consistently with mean-fiber-length values of cotton, except for one example—One mill has adapted Department of Agriculture tests of fiber properties to check influence of mean fiber length and to check ability of cotton classer to select bales from staple lengths that would maintain yarn strength—Mean length a better guide than classified length.*

By SETH CARTER

COTTON MILLS can apply the results of research on fiber properties with benefits to their classing, fiber selection, yarn strength, and running quality of the stock. One particular cotton mill recently extended the test results of the Department of Agriculture to one of its own yarn numbers. The purposes of the tests were:

1. To determine the ability of an experienced cotton classer to select bales from a limited range of staple length that would maintain fairly uniform yarn strengths over an extended period, using the usual controls and measurements found in regular classing routine.

2. To find the variations in mean fiber lengths of different bales in each mix when the classified length is the same.

3. To determine the effect of variations in the average mean fiber length of each mix on the strength of the yarn.

In the case under consideration, the classified length was 1 to 1⅛ in. The average was approximately 1⅛ in., and the grade was Middling to Strict Low Middling.

In the test shown in Fig. 1, yarn-strength factors were plotted against the average mean-fiber length of all the bales in each mix. No attempt was made to select bales according to mean lengths. Samples were taken from both sides and the middle of each bale after it was put down on the opener-room floor. These samples were conditioned to standard regain before measuring for mean lengths.

The roving was made into 30s carded warp yarn with a twist multiplier of 4.50. All yarn for skein tests and sizing was taken from the same machines, and the skeins were conditioned before size and skein-strength testing.

Yarn-strength factors were obtained by multiplying the strength in pounds by the actual yarn number. The highest break factor in the tests was used as a base of 100%. Values of the other break factors were plotted on a percentage basis to make them comparable to the mean-fiber lengths plotted in 1/100ths of an inch.

MEAN-LENGTH VARIATIONS. It will be noted on the graph that the maximum variation of average mean-lengths of the various mixes was 0.07 in. in a range from 0.85 in. to 0.92 in. The maximum variation in the average strength factors was 6%. One glaring inconsistency of the comparable graphs is that the minimum mean-length of 0.85 in. gave the maximum break factor. With this one exception, the graphs are fairly consistent. No other fiber property except mean-length was considered when plotting the graph, but of course there are other factors that can influence yarn strength.

Although fiber length with its asso-

ciated property of fiber fineness is an important factor in yarn strength, mean-length is more reliable as an indicator of potential yarn strength.

Since the variations between average mean lengths and average yarn strengths shown on the graphs are slight, it is safe to say that in actual mill operation normal cotton carefully selected and kept within a narrow range of classified lengths can be depended upon to maintain uniform mean lengths. Maintaining uniform mean lengths will usually result in uniform maximum yarn strength.

Wasty appearing bales and staple damaged by mildew, faulty ginning, or other causes should be avoided. Fiber fineness, fiber strength, and maturity are all factors affecting yarn strength; and all these appear to be directly related to mean fiber length and uniformity.

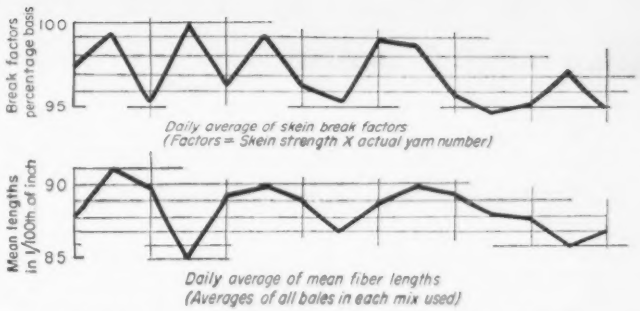

Break factors percentage basis
100
95
Daily average of skein break factors
(Factors = Skein strength X actual yarn number)
Mean lengths in 1/100th of inch
90
85
Daily average of mean fiber lengths
(Averages of all bales in each mix used)

Fig. 1. ***RELATION*** *of mean fiber length to yarn strength is shown from actual mill averages over 15 consecutive days. Each mix was followed through from opening to spinning, and all tested skeins were conditioned to standard regain.*

GRAPHIC SUMMARY OF FIBER TESTS. As shown by Department of Agriculture tests, graphically illustrated as Fig. 2, the strength of 22s carded yarn is affected by the following fiber properties:

1. Classified length (test range $\frac{13}{16}$ to $1\frac{1}{8}$ in.)
2. Average or mean-length (test range 0.60 in. to 1.00 in.)
3. Fiber-uniformity ratio (range 70 to 85)
4. Fiber fineness (range 6 to 3.5 micrograms per in.)
5. Percentage of mature fibers (range 70 to 90%)
6. Fiber strength (range 70,000 to 100,000 lb. per sq. in.)

This list of six important fiber properties is slightly different from that usually given by cotton technologists. The grade of cotton is omitted; and the important factor of average, or mean, fiber length is included. Grade in the range from S. L. M. to S. M. is here considered to have more effect on the appearance of the yarn and on the amount of waste removed in processing than on the strength of the yarn.

No attempt has been made in the summary to determine the relation of one fiber property to another or to correlate one property in combination with one or more other properties. It is a simple plotting of average skein-test strengths in their proper proportionate places on the graph for each fiber-property value.

Ninety tests for each property were taken. Many varieties were included, selected from Upland cotton grown in nearly every cotton state in the United States. The skein-strength values of the 22s carded yarn were taken for the summary because this yarn number appeared to be most suitable for the range of staple lengths used in the tests.

TEST SIGNIFICANCE. No question may be raised as to the correct position of any value point on the graph, but exceptions can be rightfully taken to any hard and fast interpretations of conclusions indicated by the graph. Selection of cotton for any required yarn strength is not the simple matter it appears to be from the classified-length line on the graph. There are other factors beside classified length that influence yarn strength.

In actual mill work, the cotton classer in laying out a mix would be little concerned with correlation coefficient (linear or curvilinear). But if a large series of tests (as in the graph),

(Continued on page 245)

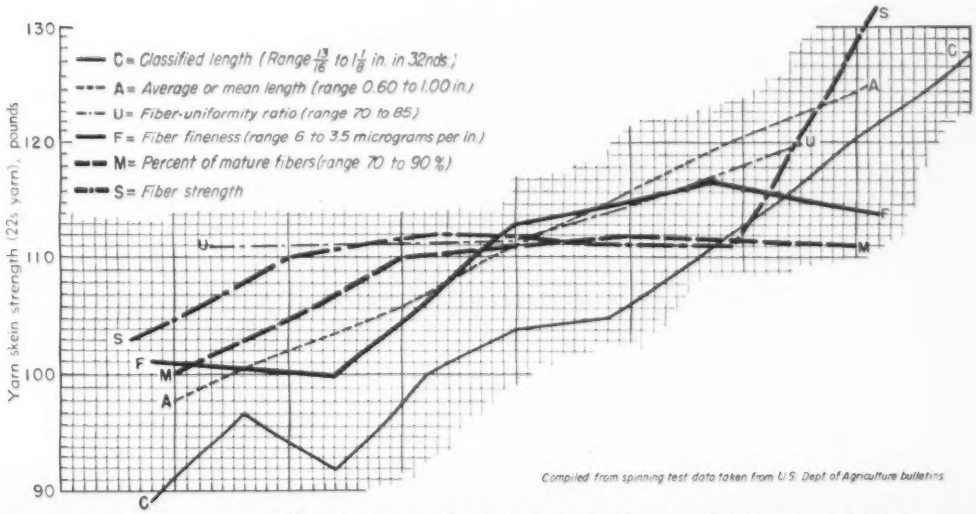

C = Classified length (Range 13/16 to 1 1/8 in. in 32nds)
A = Average or mean length (range 0.60 to 1.00 in.)
U = Fiber-uniformity ratio (range 70 to 85)
F = Fiber fineness (range 6 to 3.5 micrograms per in.)
M = Percent of mature fibers (range 70 to 90%)
S = Fiber strength
Yarn skein strength (22s yarn), pounds
130
120
110
100
90
Compiled from spinning test data taken from U.S. Dept. of Agriculture bulletins

Fig. 2. ***CURVES*** *present a summary of 90 spinning tests on selected varieties of Upland cotton made by Department of Agriculture.*

THROWSTER SAVES . . . KNITTERS HOLD QUALITY

Sunoco Fibrlub L-220 Lubricates Nylon Thread Better, Protects the Size, Reduces Breakage

One of the country's leading nylon throwsters, always interested in improving the quality of his output, ran comparative laboratory and plant tests on various coning oils. Of all these products, the best results were obtained from Sunoco Fibrlub L-220.

It eliminated preferential pick-up. It lubricated the thread better, protecting the size and reducing breakage. Along with economies in production it brought substantial savings in the cost of processing oil. Four out of five of the knitters to whom sample cones were sent for testing could not tell those processed with Fibrlub apart from those treated with vegetable coning oils, which are more costly.

The result of all this was adoption of Fibrlub as the standard coning oil; and the plant has been using it exclusively for two years.

Fibrlub L-220 is used neat in the trough of cone winders. It is applied to protect the size already added. It will not become rancid, and retains its pleasant odor. All the ingredients being compatible, no change in viscosity or composition takes place—there is no undesirable variation in the amount of oil picked up. For complete information about this economical, "Job Proved" nylon coning oil, call or write the nearest Sun Office.

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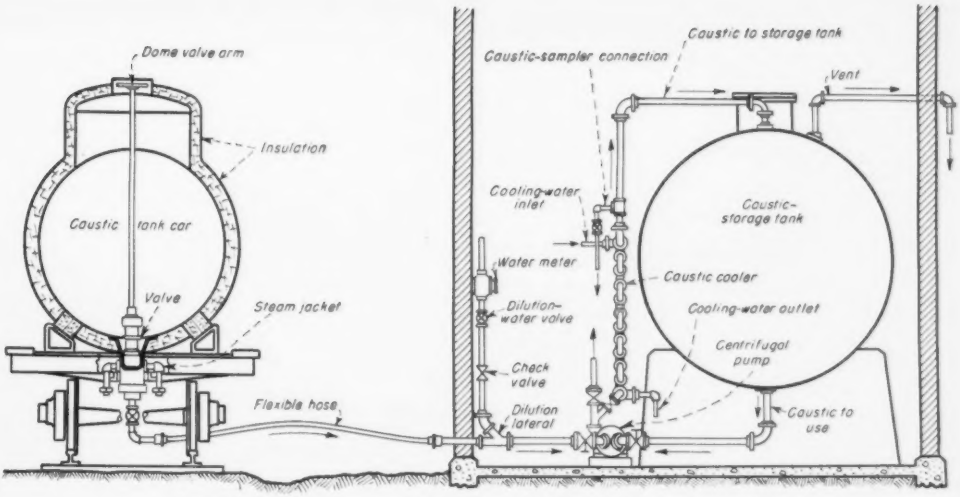

TYPICAL LAYOUT shows how 73% caustic soda is diluted to 50% during unloading.

73% CAUSTIC SODA
Saves Plant Money

HIGHLIGHTS: *Shipping costs of water saved—Caustic is diluted, as pumped from car, to 50% strength—Cooling device necessary.*

By C. NORRIS RABOLD
Consulting Editor, TEXTILE WORLD

Photos courtesy Union Bleachery, Greenville, S. C.

UNLOADING *tank car of 73% caustic soda requires hose lines at bottom of car. The larger is the caustic unloading line itself, while the smaller is a steam line used for heating the outlet valve on the car.*

BECAUSE OF THE SAVING in transportation costs, a number of finishing plants now buy 73% caustic soda in preference to the more common 50% strength. Although 73% caustic costs slightly more, the reduction in the amount of water carried during shipment results in a net saving of several cents per hundred pounds of caustic.

Unloading and handling 73% caustic involve problems, however, which are not present with the 50% solution. The 73% caustic, which freezes at about 140° F., must be diluted to approximately 50% strength before it is stored.

This dilution is necessary because of the corrosive nature of such a highly concentrated alkali on storage equipment, and in order to prevent freezing. Since the dilution of caustic soda generates heat, the solution must be cooled in a heat exchanger before it enters the storage tanks. An installation for this purpose is shown.

The 73% caustic arrives in a liquid state, since it is shipped hot in an insulated tank car lined with a special resin which prevents iron pick-up. The tank cars, therefore, are not fitted with steam coils, as in the case of 50% caustic, and only the outlet

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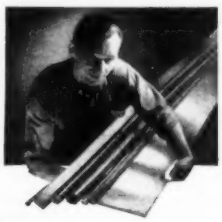


RYERSON STEEL

JOSEPH T. RYERSON & SON, INC. PLANTS: NEW YORK, BOSTON, PHILADELPHIA, DETROIT, CINCINNATI, CLEVELAND, PITTSBURGH, BUFFALO, CHICAGO, MILWAUKEE, ST. LOUIS, LOS ANGELES, SAN FRANCISCO

valve needs to be heated before unloading.

The tank car, containing 10,000 gal. of 73% caustic, or 143,000 lb., is placed on a siding. As the caustic flows out of the car, it is diluted to about 51% by the addition of water. This operation requires 7,887 gal. of water per car. The unloading of one car takes about 3 hr., and gives a total of 16,800 gal., or 208,780 lb., of 50% liquid.

The hot 50% liquid is pumped to the heat exchanger by a centrifugal pumping unit (single stage, double suction, requiring about 3.8 bhp. to operate). While a nickel-lined pump and pipes are desirable because of nickel's relative inertness to hot caustic soda, a comparatively recent installation successfully utilized black iron for both pumps and pipelines. After a year's operation, the pump had been attacked severely but was still in use. Pumps of this sort are inexpensive, so the renewal cost when the pump finally goes out of service is small.

HEAT EXCHANGER. The heat exchanger is a multi-tube shell-and-tube unit consisting of two stands five pipes high and is located near the storage tanks. Water is circulated through the heat exchanger by a second pump which picks up the water at the supply main near the storage house, then pumps it through the exchanger and back to the main.

Since the alkali enters the heat exchanger at about 258° F. and must be cooled to about 143° F., it loses 89 Btu's per pound. The cooling water enters at about 86° F., and leaves at 141° F., so that 39,000 gal. of cooling water per carload is required.

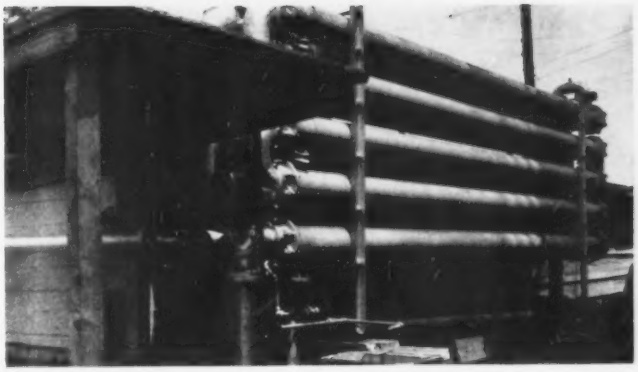
The concentration of the diluted caustic is controlled by a valve on the water-dilution line located near the heat exchanger, as shown in the diagram. The concentration of caustic is readily determined from a table after observing its specific gravity and temperature at the heat exchanger outlet. Once the control valve is set properly, there is very little difficulty in maintaining a uniform concentration.

The operation of the unloading system is very simple. The routine procedure is as follows:

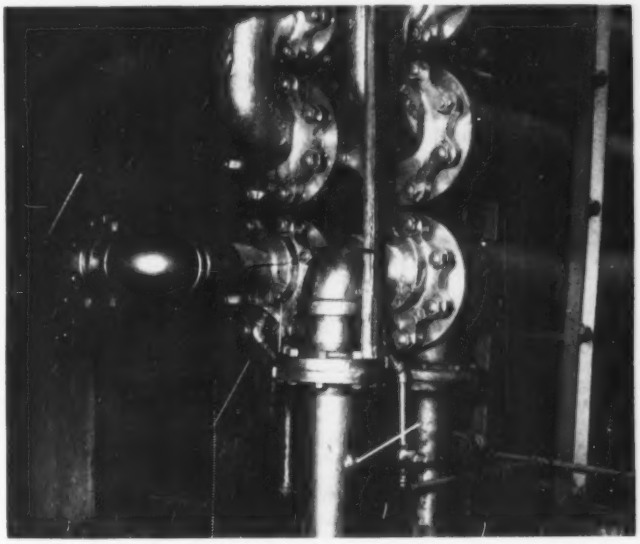
1. Open dome cover to permit air to enter the car as liquid is pumped out. Remove plug in outlet pipe.

2. Connect the car outlet pipe to the dilution lateral by means of a Mulconroy flexible hose.

3. Apply steam to the steam-jacketed outlet pipe in order to clear the internal tank car valves of any crystallized caustic.



***HEAT EXCHANGER** located outside storage house is needed to keep down temperature as caustic is diluted.*



***MEASUREMENT AND CONTROL POINTS** have provisions for inserting thermometers in the various lines to measure temperatures. Strength is constantly checked by a hydrometer (well and hydrometer are barely visible to left of pipe in center).*

4. Open the internal outlet valve in the tank car.

5. Start the unloading pump and turn on the dilution water.

6. Open the auxiliary valve above the dilution lateral.

7. Turn on the cooling water.

8. Sample the caustic from the discharge side of the heat exchanger and regulate the dilution water to obtain the desired strength. As the head of the liquid is decreased in the tank car, the flow of dilution water must be slowly reduced.

9. After the car is empty, close the auxiliary and tank-car valves, shut off the dilution and cooling water, and stop the pump.

10. Disconnect the flexible hose connection from the dilution lateral.

11. Prepare the car for return by closing the dome cover and replacing the plug in the outlet pipe.

12. The delivery line, pump, and heat exchanger are left full of dilute caustic, 25% or less, in order to reduce corrosion.

Because liquid caustic is corrosive to the skin, workers are instructed to handle it with care. Since woolen, cotton, or leather clothes are inadequate protection against direct contact with caustic, these items should be provided workers who handle it: goggles, rubber gloves and boots, rubberized aprons.

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CHEMICALS INDISPENSABLE
TO INDUSTRY AND AGRICULTURE

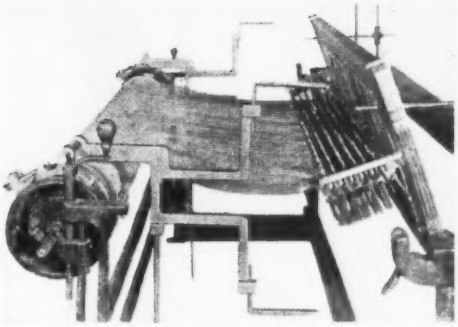


Fig. 1. THESE WARP-BEAM BRACKETS are ready to receive the harnesses with warp-stop holder attached carrying electrode bars and drop wires. This job has just been twisted-in at the twisting-in frame.

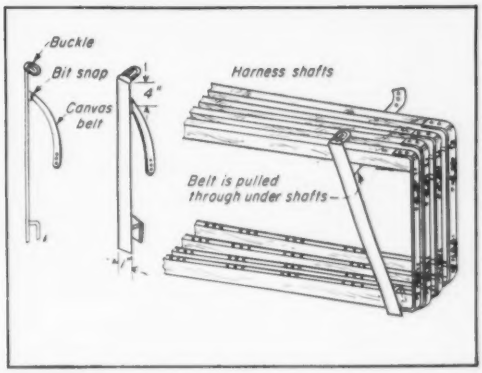


Fig. 2. FIRST STEP in making a drop-wire carrier. This is the bracket which is made fast to the harnesses.

Simple Holders Economical for Dropping WARP-STOP WIRES

HIGHLIGHTS: *Drop-wire carriers may be easily made—Dropping wires in the twisting-in department is a lower-cost operation than dropping at loom—Loom down time is also saved—Care in making carriers and handling them is essential for best operation*

By **H. E. WENRICH**

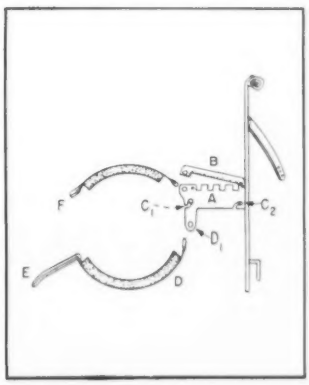


Fig. 3. RIGHT-HAND BRACKET, when completed, shows electrode holder and straps for attachment to warp beam. A—Electrode bracket; B—Bracket cover with sponge rubber; C_1, C_2—Slots for ¼-in. rod that prevents ends sagging under wire prongs; D—Section heads covered with sponge rubber 6 in. wide attach to tongue (D_1) of bracket (A) with ordinary hinge pin; E—Canvas belting entered in slip-buckle (F) when securing harness set to loom beam.

IN SOME WEAVE SHEDS, drop-wire carriers are used between the twisting-in and weaving departments. Certain special problems confront employees when first learning the fundamentals of handling drops in this manner. After they have become experienced with the carrier setup, advantages will be obvious and economies over a period of months may be almost unbelievable.

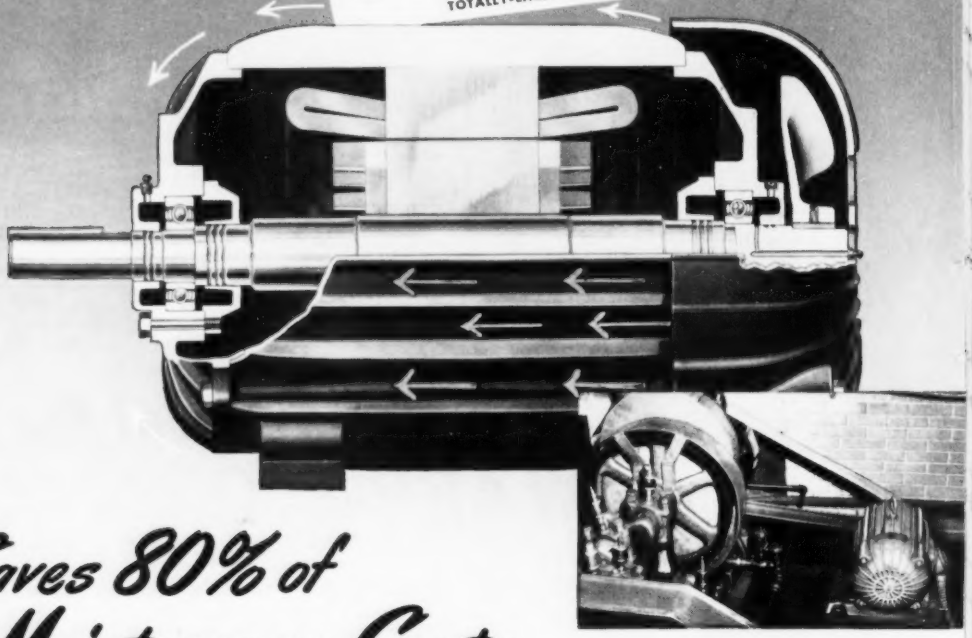
The techniques behind the carriers may be based on certain features of expired patents and on new ideas related to dropping, transporting, and mounting the wires and warps. One such device is shown in Fig. 1. Other people, including the writer, developed ideas which were patented but failed to achieve widespread use since many millmen favored washing the wires after completion of each warp. It may be argued that drops require cleaning to remove size and other dirt accumulations, but many silk, rayon, and other synthetic weaves do not discharge gums onto the wires, and offer therefore an ideal field for using carriers to save time and cut costs.

ADVANTAGES. Even when the drops require washing, carriers can still be used as a means of lowering loom down time, increasing production, and lessening costs of dropping and mounting. The cost of dropping, actually, is usually lower in the twisting-in department than in the weave room. The modern high-speed loom, with large beam mounted close to the floor, hinders a dropper's freedom of action. For such warps, the drops can be placed more easily and quickly while the warp is hanging high in the twisting-in frame. If the drops are put on in the twisting-in department, a dropper can usually be kept busy, whereas at the loom the dropper may be required to hang around an hour or longer until the brackets have been set up in the dropping position. Another factor is the wage difference between the dropper and loomfixer and other employees used in handling drop-wire mounting at the loom. At the twisting-in or special dropping frame, a dropper can put in the electrode bars himself and do the same job that a higher-priced fixer would have to do at the loom. The cost saving over a year on several thousand warps can run into many thousands of dollars. When the wires are dropped at the loom, an entire shift may be lost in loom production. When warps are mounted with the drops, the loom may actually be run-

(Continued on page 258)

CROCKER-WHEELER *Sealedpower* MOTOR

TOTALLY-ENCLOSED . . . FAN-COOLED



Sealedpower Motor driving a vertical triplex power pump where moisture is excessive.

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You can make maintenance savings of 80% and *more* with Crocker-Wheeler Sealedpower Motors. The secret? C-W dollar-saving design. No other totally-enclosed, fan-cooled motor has *exterior* cooling, with the fan-driven airstream blowing over a finned frame, carrying dust and fumes *outside* and *away*. (The outside fins that identify a Sealedpower Motor provide over 150% more cooling surface.)

But that's not all — this motor keeps cooler longer because it keeps cleaner. There's no place for lint or dirt to *collect* . . . nothing to hold heat *in*. Even on the really dirty jobs, a Sealedpower Motor will keep production going many times longer than "ventilating passage" motors, without a shutdown for cleaning.

For years of cool, clean operation and low maintenance cost, specify Sealedpower Motors. They're stock motors made for the toughest service. In new ratings from 3 to 60 hp.

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If Crocker-Wheeler builds it, it's a better built machine.

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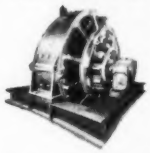


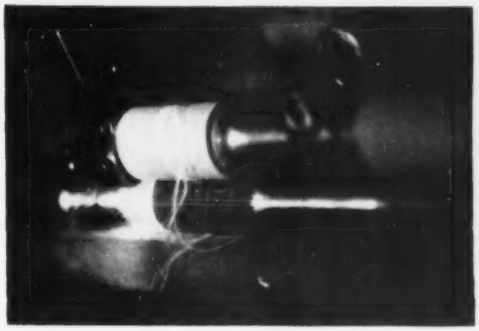
Large D-C Motors and Generators

Turbogenerators

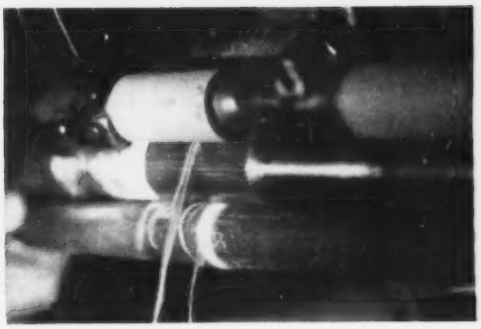
CROCKER WHEELER

ELECTRIC MANUFACTURING COMPANY, AMPERE 3, N. J.

Division of Joshua Hendy Corporation

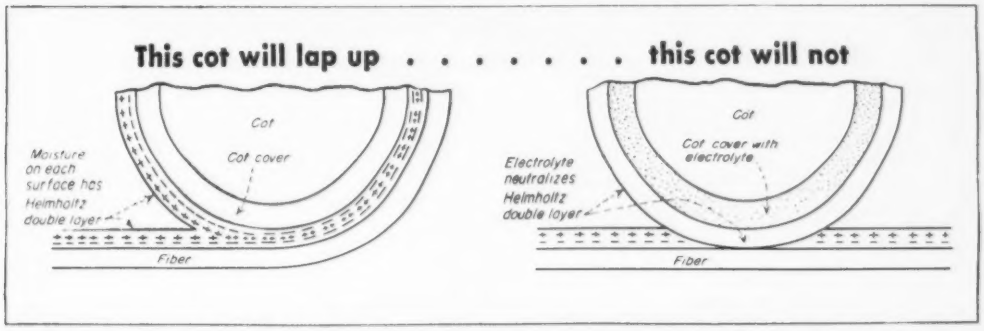


LAPPING UP is caused by actual surface attraction due to electrokinetic potential at cot surface.



NO LAPPING occurs when cot covers contain proper electrolyte to neutralize attracting forces.

Photos were taken at 1/5,000,000 sec. while cots were running 300 rpm.


This cot will lap up . . . . . this cot will not
Cot
Cot cover
Moisture on each surface has Helmholtz double layer
Fiber
Cot
Cot cover with electrolyte
Electrolyte neutralizes Helmholtz double layer
Fiber

MOISTURE LAYERS are forced together and cause the fiber to adhere to the cot. Moisture is held by the electrokinetic potential of the Helmholtz layers. (Parts of drawings are exaggerated for illustrative purposes.)

ELECTROLYTE incorporated in the composition of the cot cover destroys the Helmholtz double layer. There is no adhesion of surface moisture to cot as a result, and so fiber does not cling to the cot. One good electrolyte for this purpose is glue.

Don't Blame Static If COTS LAP UP

HIGHLIGHTS: *Newly found cause long eluded discovery—Equipment devised to predict performance of cot covers—Electrolyte neutralizes surface attraction—Understanding of cause helpful in many mill operations.*

By C. W. BENDIGO, *Editor, TEXTILE WORLD*

YOU MAY HAVE THOUGHT lapping was caused by static, by rough-surfaced cots, by something on the stock, or by gremlins. Whatever you thought, forget it; the actual cause is not that simple, although the theory is easy to understand and prove. Understanding the theory is essential to the elimination of lapping in drawing, roving, and spinning operations.

The new theory that applies to lapping was deduced by John W. Baymiller while doing research work for the Armstrong Cork Co. (He was granted patents Nos. 2,450,409 and 2,450,410 assigned to Armstrong for roll covers based on his discoveries.)

Solving the problem of lapping is especially important in plants using a vacuum system for removing scavenger waste and in plants running rayon and other synthetics.

Baymiller believed, and has since shown, that lapping is connected with or related to an electrokinetic (or zeta) potential at the cot surface. The condition involved is the formation of what is known as the Helmholtz electric double layer, and occurs, for instance, when water comes in contact with glass; this is the classic example used in its explanation.

The adhesion of water to glass is caused to an appreciable extent by a layer of negative and a layer of positive charges in the water, the negative layer being next to the glass where it is held firm and immovable.

In the humid atmosphere that is necessary in textile mills, even in the lower ranges of humidity, there is a

(Continued on page 264)

HOW TO CUT FILLING WINDING COSTS IN YOUR MILL . . .

ABBOTT Automatic RAYON QUILLERS

produce

- **Better Weaving Bobbin—** Especially designed to wind overlapping layers at both the tip and base of the conical section of the bobbin which, with proper tension, gives you a bobbin of the very best weaving characteristics.
- **Lower Cost Operation—** The moving assembly line principle is the feature of these Quillers, as Traveling Spindle Units eliminate a lot of unnecessary floor labor and the need for operators to fill a multitude of small supply magazines.
- **One Automatic Head—** Simplicity of operation greatly reduces maintenance overhead—permits manufacture at lower cost per machine to you. Only one Automatic Head per machine feeds bobbins from a supply hopper holding several thousand empty bobbins into each Traveling Spindle Unit and doffs full bobbins at the same time.

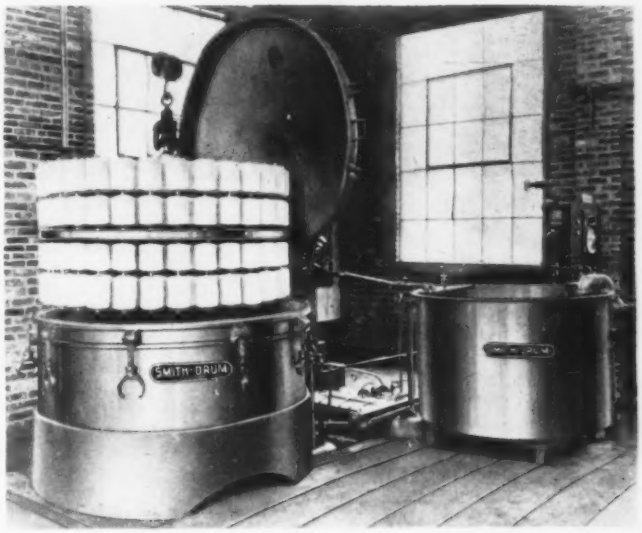
Write for further information to:

ABBOTT MACHINE COMPANY
WILTON, NEW HAMPSHIRE
SOUTHERN OFFICE, GREENVILLE, S. C.

SYNTHETIC DETERGENTS
Have Broad Application

HIGHLIGHTS: *Synthetic-organic detergents effective as wetting and penetrating agents—Short-cuts possible in fulling and after carbonizing—Kiering and bleaching aided—Hosiery process cut from 4 hr. to 90 min.—Enzymes speeded.*

By Dr. O. M. MORGAN
National Aniline Div., Allied Chemical & Dye Corp., Buffalo, N. Y.



SYNTHETIC DETERGENTS *are used in package machines for wetting, scouring, and dyeing of all types of textile yarns.*

SYNTHETIC DETERGENTS were developed about 20 years ago for special applications in the textile industry where soap was particularly troublesome. At that time, those detergents were expensive chemical luxuries which did a good job, but were used sparingly because of their high cost. During the period when synthetic detergents were being introduced, their efficiency and versatility were soon recognized. They were used at first because of their properties as wetting agents; later on, for more and more applications where their cost could be substantiated.

While these developments were taking place in the textile industry, other industries were also recognizing the value and versatility of these detergents. The amount of the materials produced increased rapidly. The more successful products, which were the most versatile, soon reached the mass production stage; and, by allowing for decreased manufacturing costs, price benefits were passed on to the consumer. Synthetic detergents, which once sold for several times the price of soap, are now less expensive than soap; and mill men, who once considered them luxuries, now find it expensive to operate their plants without them.

PROPERTIES. A rather unusual combination of physical and chemical properties is offered by quality synthetic organic detergents. As an example, the following characteristics are claimed for the materials manufactured under the trademark Nacconol by National Aniline Div., Allied Chemical & Dye Corp.:

1. Stability to acids.
2. Stability to alkalis.
3. Stability to usual working concentrations of oxidizing and reducing agents.
4. Stability to hard water.
5. Wetting ability.
6. Scouring ability.
7. Emulsifying ability.
8. Cleans in warm or cold water.
9. Saves time by rapid scouring action.
10. Low concentrations are effective.

From the above list, it will be recognized that a product with these physical and chemical characteristics may be used to advantage under practically any operating condition in a textile mill. When this is considered, along with the low unit cost, it becomes apparent why such materials have been accepted for a wide variety of applications, only a few of which are described here.

FOR WOOL. For the scouring of raw wool, detergents of the sodium-alkylaryl-sulphonate type have been widely accepted for reasons of both quality and economy. Control methods for this process have been developed which are simple and effective. This synthetic organic detergent is particularly successful in the scouring of pulled wool where large quantities of lime are carried into the system and produce conditions that make scouring with soap difficult.

For the scouring of woolen or worsted yarns or piece goods, this type detergent is particularly effective because of its scouring speed and ease of rinsability. Yarns or fabrics that have been lubricated with mineral-oil compositions may be scoured with the detergent by itself or in combination with sodium chloride or sodium bicarbonate. Yarns or fabrics which contain animal- or vegetable-oil lubricants are handled to best advantage either with the synthetic detergent by itself or in combination with a suitable alkali, such as soda ash.

The sulphonate-type detergent is also effective in fulling wool piece goods. If the mill is capable of fulling under acid conditions, desirable short cuts in processing may be effected. After carbonizing, the goods may be wet out with a dilute solution of the synthetic detergent and fulled directly under acid conditions. After fulling, the goods may be scoured under acid conditions by the addition of a small amount of the synthetic detergent. It

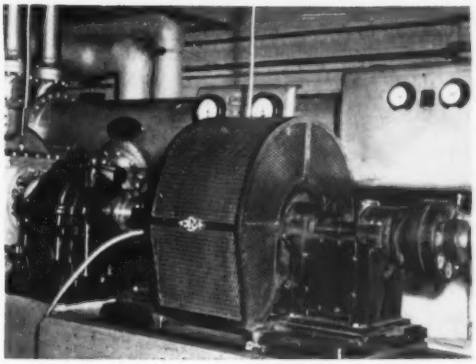
(Continued on page 268)

Welcome the man who presents this card. He's ready and anxious to help you increase consumer good will by protecting your product against the hazards of shipping—and to help you increase sales through better packaging.

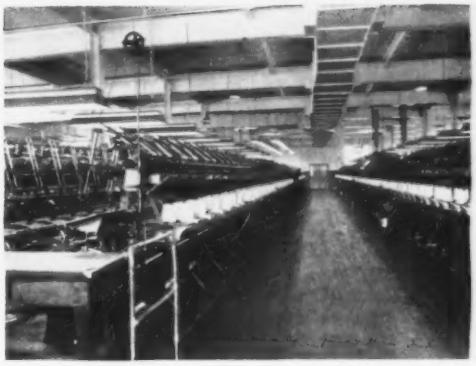
GAYLORD CONTAINER CORPORATION
General Offices: SAINT LOUIS

Corrugated and Solid Fibre Boxes • Folding Cartons • Kraft Grocery Bags and Sacks • Kraft Paper and Specialties

196



ADJUSTABLE-SPEED MAGNETIC DRIVE (center) has 150 hp., and a speed range of 353 to 1,765 rpm. Motive power comes from motor through speed-reducing gear, magnetic drive, and compressor (left).

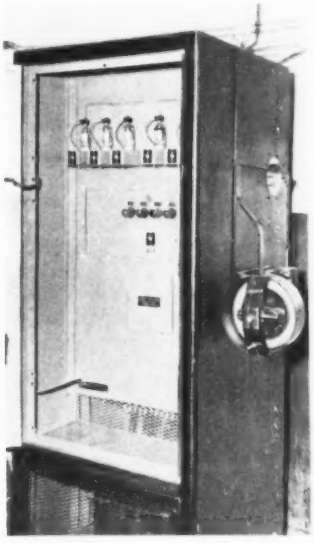


REFRIGERATED AIR-CONDITIONING in the Wiscasset mill knitting room is needed only part of the time, although both relative humidity and temperature are constantly controlled.

Changes in Air Conditioning Aided by MAGNETIC DRIVE

HIGHLIGHTS: *Knitting department of Wiscasset Mills Co. uses unique drive for operating refrigeration compressor—No mechanical connection exists between motor and compressor—Speed changes for varying air conditioning said to be obtained smoothly.*

C. MALLARD BOWDEN
Southern Editor, TEXTILE WORLD



ELECTRONIC CONTROL of speed is obtained by the Regutron above, which is operated by a potentiometer and an automatic temperature device.

THE KNITTING DEPARTMENT of Wiscasset Mills Co. in Albemarle, N. C., decided a few years ago to add refrigeration to an existing evaporative-cooling system that served a portion of the plant. This plant knits fine-gage, full-fashioned Cannon hosiery for women.

Today, the management of the knitting department of Wiscasset Mills Co. is installing complete year-round air conditioning in another area. Design and selection of the refrigeration drive equipment will be essentially the same as that selected for the present installation—a magnetic coupling. The magnetic coupling transmits power from a 150-hp. induction motor to a centrifugal refrigeration machine.

Design problems for the first installation were worked out by the mill in conjunction with engineers of the Carrier Corp., and details were prepared for the program. Actual installation work consisted of completely revamping and modernizing the existing evaporative-cooling system. The old system maintained constant relative humidity in the various knitting departments but gave no control over the temperature. The new system was designed to control both temperature and humidity carefully.

The refrigeration plant consists of a Carrier centrifugal refrigeration machine driven by a 150-hp. squirrel-cage induction motor through a magnetically operated variable-speed coupling manufactured by the Electric Machinery Mfg. Co. The output speed from the magnetic coupling is stepped up by a speed-increasing gear to the speed required for the actual operation of the refrigeration compressor. This refrigeration machine serves to cool water that is supplied to a spray-type dehumidifier in the air-handling system serving the knitting rooms. In addition to the refrigeration machine, an induced-draft cooling tower for cooling condenser water is located on the roof of the equipment room.

WISCASSET SYSTEM. The function of the refrigeration machine, as noted, is to cool water that is supplied to the spray-type dehumidifier in the air-handling system that serves the knitting rooms. During summertime operation, the main supply fan withdraws air from the knitting rooms

AN OPEN LETTER TO ALL CONCERNED

WITH THE TEXTILE WET PROCESSING INDUSTRY:-

Let me bring you up-to-date as of press time -- with the Textile Wet Processing Exposition that will be held in New York, at the 71st Regiment Armory, 34th Street & Park Avenue, June 6, 7, 8, 9 and 10.

This show is set up expressly for the fast-moving wet processing branch of the textile industry.

It is the only show of its kind ever held anywhere with every exhibit geared to the interests of those engaged in the bleaching, dyeing, printing, mercerizing and finishing of all textiles -- no spinning, weaving, or knitting machinery, or any equipment for the MAKING of textiles will be shown.

Mills with their own finishing departments, and independent finishing companies, are sending their top-level men to this show to see the exhibits of key manufacturers of machinery and supplies, companies like Butterworth, Van Vlaanderen, Blickman, Glasco, General Dyestuff, Richmond Oil, Soap & Chemical, Standard Brands, Walton Laboratories, Perfecting Service, Bemis Bro. Bag, etc., all of which will be of keen interest to them, as well as to attend the symposium to hear leaders of the industry discuss the problems which are of daily concern to them.

For men in the wet processing end of the industry it will indeed be a great show. Over 350 of the most important companies in the field have already requested from 4 to 20 complimentary trade guest tickets for their top executives and their purchasing agents. Hundreds more will request them before show time.

Moreover, we have arranged with McGraw-Hill's Direct Mail Department to send invitations and guest tickets to finishing divisions and finishing companies throughout the entire industry.

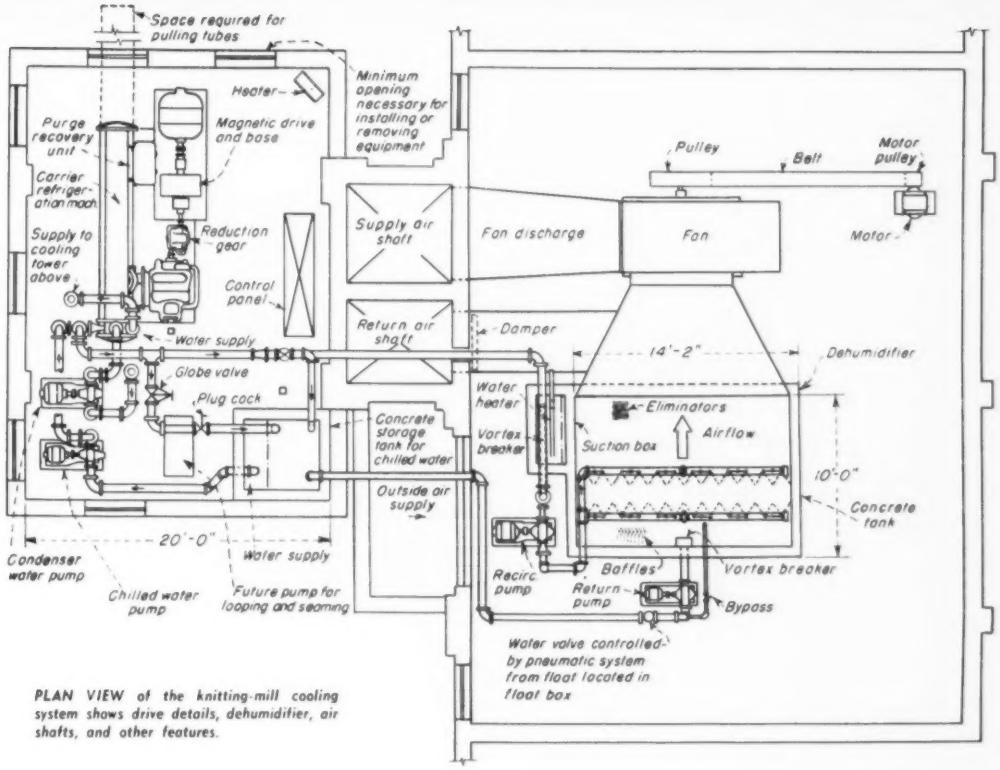
If you are interested in wet processing, this show is a "must" for you -- write us for personal complimentary tickets today and we will send them to you immediately.

If you are a manufacturer of machinery, chemicals, dyestuffs, and other supplies used in the wet processing end of the field, this show offers you the opportunity to display your product to men who are eager to find out how you can help them.

Mills with their own dyeing and finishing plants and independents today are seeking methods of increasing efficiency of operation to improve their competitive position, and they have the cash reserves NOW to enable them to buy the things they feel will improve production results.

Cash in on the buying interests of those progressive finishers who will attend this show ... the purchasing agents and top level executives. Write us today for exhibit details and/or your trade guest tickets.

Textile Wet Processing Equipment & Supplies Exposition
Suite 205 - 36 West 47th St., N. Y. 19, N. Y.
Arthur Tarshis, Exposition Manager
IN 2 - 4827-8-9



PLAN VIEW of the knitting-mill cooling system shows drive details, dehumidifier, air shafts, and other features.

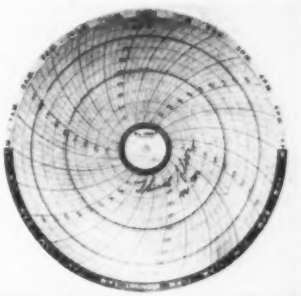
through the spray-type dehumidifier, where relatively cool water is sprayed against it. This spraying serves not only to fix the temperature of the air, but also removes heat picked up by the air returning from the knitting rooms. The spraying condenses any excess moisture not desired or required for the maintenance of the proper relative humidity needed for full-fashioned knitting. After the air has been conditioned and treated in the spray-type dehumidifier, the main supply fan then forces the air through a suitable duct system to the various knitting rooms where it is introduced into the spaces to be conditioned. Pneumatically operated automatic controls located in the various conditioned areas control the operation of automatic-volume dampers and steam coils which are located within the ductwork for ironing out any variations in relative humidity and temperature that may occur in the conditioned spaces. In this manner, temperature as well as relative humidity are maintained evenly day and night at the point desired by the plant management.

At all times, a certain portion of the air being supplied to the knitting rooms is drawn from out-of-doors and mixed with the air returned from the conditioned spaces before passing through the spray dehumidifier. This relatively small quantity of air from out-of-doors is for ventilation purposes and prevents the creation of a stale atmosphere within the spaces conditioned.

NEW MOTIVE POWER. The management of the mill, in conjunction with the engineers of the Carrier Corp., had available during the design stages the selection of a fairly wide range of equipment to use as motive power for the operation of the centrifugal refrigeration machine. In order to obtain the widest possible range in control of speed and the most precise adjustment in the operation of the refrigeration compressor, it was decided to adopt a magnetic coupling.

The refrigeration requirements, and consequently the compressor speed, vary through a fairly wide range with variations in outside weather conditions, as well as inside load conditions, in the knitting rooms themselves; and the use of the magnetically operated adjustable-speed coupling was said to permit the greatest flexibility in compressor speed. When compressor capacity is matched against actual requirements, the greatest economy in power consumption is obtained in the operation of the refrigeration plant.

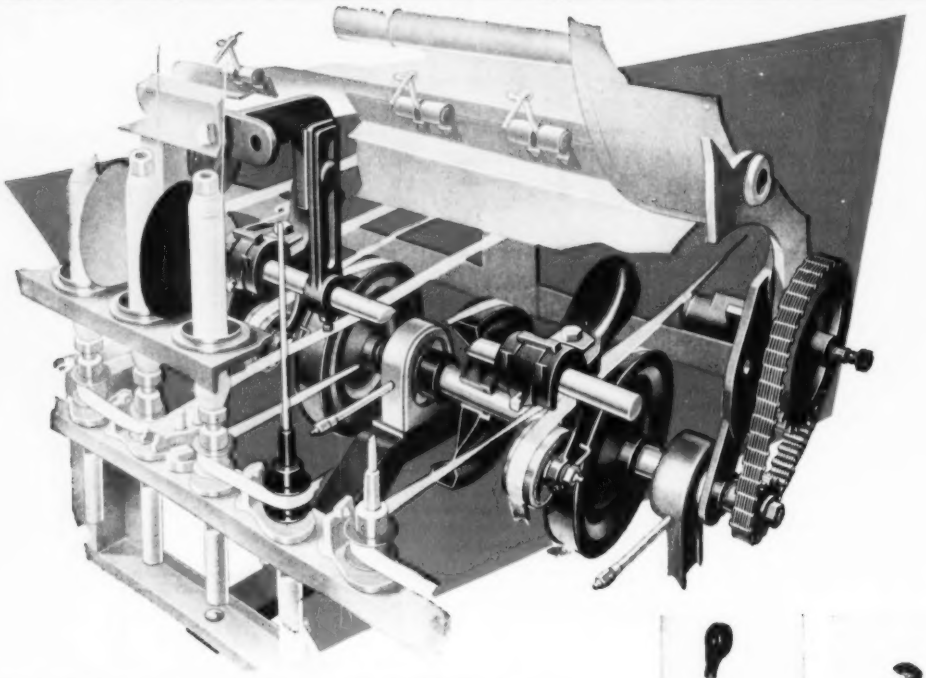
(Continued on page 254)



***WATER TEMPERATURE** is maintained at 48° F., and room temperature at 80° F., in the Wiscasset knitting, looping, and seaming departments.*

give your old frames that new look

with MEADOWS Conversions!



B-205

B-212-R-213

B-214-LA

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● The present cost of new frames, plus the natural desire to improve and utilize existing equipment, has prompted many mills to modernize their old frames, (either band-driven or old style tape-driven) with *Meadows Conversions*... Consisting of silent chain-drive; individual driving pulleys; high-strength ground and polished shafting (mounted on heavy duty ball bearings); ball bearing tape tension pulleys, and light weight solid aluminum alloy separators—a Meadows Conversion means less vibration, low power consumption, uniform speed and twist, fewer ends down, and *no more cylinder trouble!*... We engineer and service each installation, manufacture all parts, and will be glad to have our representatives survey and estimate your frames without obligation, in their respective territories. ***More than 8 million spindles equipped with Meadows Ball Bearing Tension Pulleys.***

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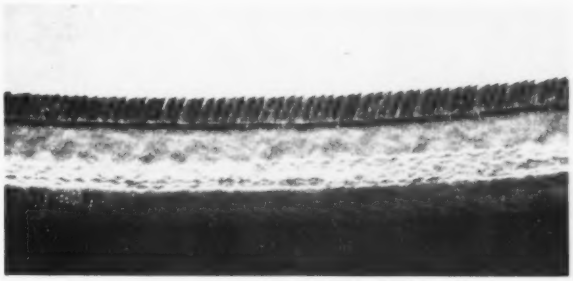
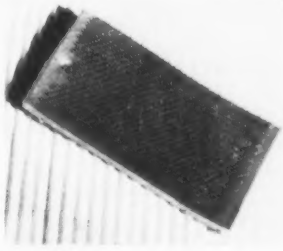


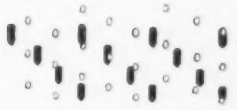
SIDE VIEW of new clothing shows angle at which wire is set and composition of base.

NEW CARD CLOTHING
Cuts Need for Stripping

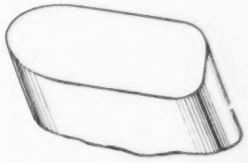
HIGHLIGHTS: *Use at Karagheusian woolen spinning mill reduces stripping time from daily to every two to three weeks—New clothing has plastic face — Torpedo-shaped wires are not bent—Can be ground.*

By GUSTAV ZELLNIK
Consulting Editor, TEXTILE WORLD





SPACING of new wire (torpedo-shaped) differs from that of regular round wire (26/30 double convex).



SHAPE of wire being tried in Karagheusian woolen spinning mill gives it rigidity.

A NEW TYPE OF woolen card clothing that looks like a cross between garnett wire and flexible clothing is being tried out successfully by the spinning division of A. & M. Karagheusian, Inc., Roselle Park, N. J.

With the new clothing, stripping has been reduced from daily to every two to three weeks. Richard Dorian, plant engineer, states that clothing put on the cylinder in October, 1947, is still in good shape. It has been running 100 hours weekly since then. The entire card is now equipped with the new wire.

It is well known that when card clothing fills up with fiber, the stock is rolled and pulled instead of being carded, and the card chokes up. Sometimes at the Karagheusian mill, cards with regular wire have to be stripped oftener than daily, depending upon dirt, burrs, and grease in the wool.

On one test, the new clothing, called Strip-O-Matic and produced by Benjamin Booth Co., Philadelphia, ran from Nov. 19, 1948, to Dec. 16 before stripping seemed necessary. A plastic face on the foundation is largely credited with the reduced stripping; another factor is the unbent wire. Instead of bending the wire to achieve an angle, it is inserted in the base at an agle.

When a color change takes place, stripping has to be done regardless of whether the card wire is loaded or not. When it eventually does become necessary to clean out the accumulation of grease, burrs, shives, sticks, etc., stripping is simplified because of the smooth plastic face; the pitch, shape, and height of the wire; and the setting of the wire.

TORPEDO SHAPE. The shape of the wire itself is similar to a torpedo, as seen on the illustration. This shape has the tendency to provide a streamline effect. That, together with the greater spacing longitudinally but somewhat closer transversely (compared to an equivalent double convex

(Continued on page 274)

50 YEARS OF SERVICE

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It takes scores of steady customers to keep a company climbing through the business peaks and valleys of 50 years. Satisfying them means providing a lot of service of the right kind at the right time.

In 1899, the founders of General Chemical believed in this when they combined a dozen small companies into one well-knit organization. Today, that concept of General Chemical service has resulted in more than 90 producing and distributing facilities in centers of commerce from coast to coast.

In research, engineering, production, and in sales, everything is done that can be done to serve you well. Remember this when you specify General Chemical—first for Basic Chemicals for American Industry.

GENERAL CHEMICAL DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.
OFFICES IN PRINCIPAL CITIES FROM COAST TO COAST

NO WEIGHING of individual lots of fiber going into a blend is necessary. The weighing feeder automatically proportions the fiber in predetermined amounts, thus eliminating scales and possibility of human errors.

FIBER IS DROPPED from all three feeders simultaneously onto a conveyor belt traveling 300 ft. per min. to the picker.

Fiber Meter Makes BLENDING AUTOMATIC

HIGHLIGHTS: *Marion Mfg. Co. develops automatic blending system for multi-fiber blends—Weighing is eliminated—Three Fiber Meters deliver 1,450 lb. per hr. to 300-ft-per-min. belt conveyor.*

By L. J. WILLIAMS

TIME- AND LABOR-CONSUMING manual weighing of lots has been eliminated from the fiber-blending process as a result of research and development at Marion Mfg. Co., Marion, N. C. The company has developed a fiber-blending process for use in its rayon-yarn manufacturing that is applicable throughout the textile industry.

Three "Fiber Meters" are lined along a conveyor belt. These feeders deposit required amounts of fiber at regular intervals on the moving belt to maintain a uniform mixture. If it is desired to blend certain percentages of several different fibers, one feeder is used for each fiber.

It is not necessary to weigh the amount to be fed into the hopper of each feeder; the hoppers are kept moderately full. Bales of fiber are kept behind the hoppers, and the operator puts the layers of material in without going through the process of weighing the exact amount of each type of fiber. However, the feeders automatically deliver correct predetermined amounts at the front to the conveyor belt.

The mill's new system not only eliminates scales used to weigh amounts of each fiber in a mix, but also saves time involved in weighing and dumping material into picker hoppers.

Three automatic feeders at Marion Mfg. Co. can deliver a total of 1,450 lb. per hr. (at 100% production), depending upon the mix, to a conveyor belt traveling at a surface speed of 300 ft. per min. This conveyor belt delivers the blended fibers direct to the picker hopper in a uniform flow.

SAMPLE FIBER MIX. A mix of three different fibers might consist of 30% of fiber A, 55% of fiber B, and 15% of fiber C, giving a total of 100% for the three. These three classes of fibers would be fed to a conveyor belt by three individually operated blenders; Fiber Meter No. 1 would drop 2 lb. of material onto the conveyor belt, Fiber Meter No. 2 would drop 18 oz., and No. 3 would deliver 9 oz. All feeders drop the fibers at the same time, and make a delivery every 9.1 sec.

The amount to be dropped by each machine can be varied, thus giving a wide variety of possible blendings to be attained by three or more machines. Reworked waste can be blended into a mixture by installing a small feeder alongside the other machines. This unit can deliver about one-twelfth reworked waste material onto the conveyor belt while eleven-twelfths of the entire blend is dropped by the Fiber Meters. Of course, the amount of reworked waste fed into the mix can be varied to meet individual mill requirements. With a battery of three

(*Continued on page 256*)

A "SUPERIOR" CLEANER at the end of the conveyor is fed from a hopper into which the belt feeds. A switch stops the feeders and belt when the hopper is full.

Quik Quiz on CONDULETS

Questions and answers
regarding the backbone of an electrical wiring installation

Type C Obround Condulet
Broken-away view showing (1) tapered threads, and (2) the Wedgenut fastener

Question: When were CONDULETS first made?

Answer. In 1906 Crouse-Hinds Company introduced CONDULETS to the electrical wiring industry. CONDULETS represented an entirely new idea in conduit outlets, totally unlike the outlet boxes and fittings previously made. CONDULETS were destined to revolutionize electrical conduit installation practice.

Q. How did the word "CONDULET" originate?

A. Crouse-Hinds new conduit outlets needed a name so the word "CONDULET" was coined, a contraction of "conduit" and "outlet." It is registered in the U. S. Patent Office and designates a product made only by the Crouse-Hinds Company.

Q. What were the advantages of CONDULETS over previous outlets?

A. The older outlets were both unhandy and unsightly, while the new cast CONDULETS were streamlined, compact outlets that were handy to install and produced a neat appearing job. The oblong body with round ends suggested the name "Obround", which was applied to the first series of CONDULETS.

Q. Were they like the present Obround CONDULET?

A. There have been important refinements, but the basic design remains the same. The most notable improvement was the Crouse-Hinds Wedgenut fastener which provides a handy way to firmly attach the covers.

Q. How many types are now in the Obround Series?

A. Forty-nine types. Sizes to fit ½" to 6" conduits, with a wide selection of interchangeable covers and wiring devices.

Q. What other CONDULETS have been added to the line?

A. Obround CONDULETS were so well received by the electrical trade that a variety of other types followed in rapid succession. In fact, the CONDULET line has grown far beyond the original concept and now includes, besides the items needed for the usual conduit installations, a complete line of explosion-proof and dust-tight CONDULETS for use in industries where explosive gases or dust require special electrical safeguards.

Q. Why are all the threads in CONDULET hubs taper tapped?

A. Because all conduit threads are tapered and it makes an imperfect job if a tapered thread is screwed into a straight threaded hole. When using CONDULETS, the threads on the conduit firmly engage every thread in the hub, because both are tapered. This makes a rigid joint which will not loosen under vibration and also assures permanent ground continuity. Taper tapping is an important Crouse-Hinds feature.

Q. What about CONDULET quality?

A. CONDULETS have always been noted for the highest quality. They are scientifically designed in Crouse-Hinds Engineering Department and carefully manufactured in a modern factory by skilled craftsmen from the finest material obtainable. Crouse-Hinds operates four separate laboratories where trained technicians assist in the development of new products and maintain a constant control over the quality of CONDULETS.

Q. How many CONDULETS are there today?

A. More than 15,000 items constitute the present CONDULET line. Conduit installations in all parts of the world are equipped with CONDULETS.

Q. WHERE CAN I BUY CONDULETS?

A. From the beginning it has been the Crouse-Hinds policy to have . . . **A Nationwide Distribution through Electrical Wholesalers.** There is one near you.

CONDULETS
FLOODLIGHTS
TRAFFIC SIGNALS
AIRPORT LIGHTING

CROUSE-HINDS COMPANY
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A Nationwide Distribution Through Electrical Wholesalers

Worsteds for Hard Wear Need Special Attention in DYEING

HIGHLIGHTS: *Whipcords and baratheas call for high standards—Rolling selvages, heat marks, over-milling, and stains can be avoided—Care in selecting dyes aids fastness of finished goods—Chrome and acid dyes include suitable types.*

By K. E. MARSDEN
Leeds, England

THE HARD SERVICE required of worsted whipcords and baratheas demands care and attention to detail in finishing. End uses include riding-breeches, work uniforms, service uniforms, shooting jackets, and other garments of general utility wear. Such uses call for both excellent finish and good all-round dye-fastness properties. With whipcords, delicate shades are usually in demand—fawns, camels, moles, grays, light-rusts, tans, etc. With baratheas, because of their particular use for uniforms, the shades are of darker hue—navy, maroon, brown, and bottle-green, etc.

Problems often plague the dyer of these cloths. The fabrics are easily bruised, with resulting chafe marks. The selvages often tend to roll, thus producing "listed" pieces. Where care is not taken during final washing after dyeing, heat marks or crimps appear. Certain types easily felt up in dyeing, giving an over-milled appearance and loss in width. Finally, these cloths seem to possess a magnetic attraction for stains—pin-point dye stains, rust, dirt, grease, etc.

Precautions must be taken against these problems. Bagging the pieces, selvage to selvage, provides real help toward avoiding listing, chafe-marks, and stains. Bagging is usually carried out with the face of the piece inside. This, of course, may create a further problem of penetration. The addition of penetrating agent, pyridine type, will prove useful in this connection.

Where felting occurs during dyeing, the use of a low-reel dye kettle is to be recommended, while the addition of an anti-felting agent of the Levana type helps. Heat marks can be avoided only by insuring that the pieces are absolutely cold prior to taking out of the dye kettle. Finally, the pieces should never be wound round the reel but run out over the external running-out rollers.

FASTNESS REQUIREMENTS. Whipcords intended for riding breeches require the use of dyes of good fastness to light, perspiration, washing, and rubbing. Chrome dyes applicable by the one-bath metachrome, chromosol, or monochrome methods are useful. Procedure recommended is to use 10% glauber salt, 4% metachrome mordant plus a penetrating agent, and also a sulphated-fatty-alcohol-type detergent to preserve cleanliness. Useful dyes of the chrome type include: Metomega Chrome Yellow ME, Orange ML, Red GM, Black Blue G, Brown 3 GL, Brown B, Blue Black B types (Sandoz).

The pieces are entered at 120° F., followed by a run without steam for 5 min. They are then brought to the boil in 1 hr., boiled another hour, after which sampling takes place. If the shade is a little on the light side at this point, the desired shade can often be attained by the addition of 1% acetic acid (40%), followed by a further boil for 20 to 30 min. Alternatively where feeding becomes necessary, dyes of the neutral types are to be recommended, such as: Milling Yellow O, Polar Orange, Azo Rubinole 6B, Polar Red, Erio Viridine, Cyananthrol R, Wool Fast Blue (GL, BL, FF) types.

It is possible to obtain satisfactory results using acid colors of the extra-fast type—combinations of Xylene Fast Yellow 2GP, Azo Rubinole 3 GP, Alizarine Light Blue 4 GL types, dyed with additions of 10 to 20% glauber salt, 2% formic acid, plus a penetrating agent and a sulphate fatty alcohol.

PENETRATION. Penetration must be carefully watched, especially in the heavier-weight cloths. Time taken to reach the boil can affect this point, since rushing to the boil often results in bad penetration.

Rubbing fastness can often be improved by an aftertreatment in the washer in which fuller's earth should be used, 4 lb. for 4 pieces, and clean water. The run should last a half hour, followed by a clean wash with running water over a similar period of time.

With heavier barathea cloths, both chrome and acid dyes are used; the former by the afterchrome, metachrome, and chrome-mordant methods. Navy shades, for instance can be dyed by afterchrome method, using a Chromotrope type blue; or by chrome-mordant method, using Alizarine Blue OCR type.

Maroons can be dyed afterchrome, using Erio Chrome Red B type, or metachrome with Metomega Chrome Bordeaux. Bottle-greens with Alizarine Cyanine Green types, plus additions of shading dyes, and dyed metachrome. Browns may be applied by the metachrome process or by use of acid dyes.

High standards of work are called for in these cloths. Good shade matching, level and clean pieces are essential. Excellent preparation is of vital importance.

He's a particularly vicious thief. He preys on machines in plants of all kinds all over the country—slowing production, slashing profits, collecting an enormous toll from industry.

You think he's not at work in *your* plant? It will pay you to be suspicious enough to find out *for sure*—for his ways are devious.

For example . . . here are some places to look.

Are the grease guns in your plant still being filled by old-time "paddle" methods—wasting time, wasting grease, risking contamination and dirt? You've caught a suspect!

You can save 3¾ man hours for every 100 lbs of grease and eliminate contamination risks.

Are you lubricating machines by "hand and muscle"—the old, time-wasting, hit-or-miss method? Here's evidence of thievery!

You can save as much as 23.9 man hours in applying each 100 lbs. of grease!

What about the cost of "down-time"—when a bearing burns, a gear fails, precision is "off" because of faulty or inadequate lubrication? Thievery again!

You can eliminate human error—make sure that each lubrication point gets the correct grease, in an accurately measured amount and at the proper time.

Have you any suspicions that there is a profit thief loose in your plant? Is he hiding behind the mask of faulty, old-time, costly lubrication methods—robbing you just as surely as though he "tapped the till"?

There's one proven way to stop this loss.

An Alemite representative can tell you in 10 minutes how Alemite Methods will simplify and better organize your lubrication procedures. He can show you how mechanized lubrication from barrel-to-bearing will increase your production and profits.

Telephone your Alemite Distributor. Or write to Alemite, 1888 Diversey Parkway, Chicago 14, Illinois.

ALEMITE

MODERN LUBRICATION METHODS THAT CUT PRODUCTION COSTS

STEWART WARNER

"Give us the tools . . ."

Now is the time to *FIGHT SOCIALISM* in Washington

Do we want to follow Britain down the economic skids?

We Americans face that question today. For we are being advised by Administration economists in Washington to take the course which destroyed Britain industrially. It is the temporarily easy course of cutting down expenditures for tools in order to have more things to consume right away.

The President's Council of Economic Advisers tells us we are spending too large a part of our national income on new tools and equipment. A larger share, they say, should go for goods and services used directly by consumers.

Before we take that advice, let us look at Britain. When the British once allowed their industrial plants and equipment to run down – they started down a dreary road to industrial stagnation and decay.

British industry once ruled the world. Low production costs enabled it to undersell all competitors. Efficiency gave British workers the highest living standards anywhere.

Now all that Britain has between it and economic disaster is pluck and American aid through the Marshall Plan.

The British people are living poorly – still on rations and in austerity. With practically everyone working, and working longer hours than we do in the United States, they cannot produce enough to pay for the raw materials and food they must import.

How did Britain get in this fix?

The story is complicated. British sacrifices in two wars play a tragic part in it. But another fact also stands out:

Britain began to go downhill even before World War I – when British industries allowed their plants and equipment to grow obsolete.

Once that process started, it grew steadily worse. By 1929 the share of Britain's national income being plowed back into capital investment had shrunk to less than two-thirds of what it had been twenty years earlier. We were putting twice as big a share of our national income into capital goods at this same time.

Skimping on capital equipment – on new plants and new tools – put the skids under industrial Britain.

World War II only speeded up a process already well under way.

continued on next page

British industry today shows the results of its failure to keep up to date. Here are three examples found by Dr. Laci Rostas, Britain's leading authority on measuring workers' productivity:

An American produces *four* times as much pig iron as his British counterpart.

He produces *more than four times* as many tires.

In all industry, on the average, an American produces almost three times as much.

The real reason is the American's better tools. The British are struggling with equipment that is, on the average, forty years old.

Britain once had a big head start in industrial equipment. But she let it slip away. And as it went, Britain's industrial and political leadership slipped with it.

How could British leaders have slept while all this happened?

This, too, is a complicated story. But parts of it stand out clearly:

1. *British business men put in more time perfecting cartels to avoid competition than they did in improving their plants and equipment to meet it.*

2. *British labor leaders concentrated on sharing the work and sharing the wealth—rather than doing the job necessary to have enough wealth to make the sharing worthwhile.*

3. *British governments taxed away the means to buy new equipment. By steadily increasing personal taxes, they undercut the* ability *of individuals to invest in new equipment. Finally, they took away the* incentive *to get new equipment by progressively taxing away any returns on it.*

4. *Farseeing socialists smiled all the while, knowing that as private industry more and more lacked the tools to do a progressive job, they would have their chance to run the country.*

Now, with Britain's fate in their hands, the socialists are trying desperately to stem the nation's economic decline by rebuilding its industrial plants and equipment.

They are making a little headway, but not enough. There are several reasons. One is that Britain must export most of the new equipment she can make. *Another major reason—increasingly important for her future—is that money needed to renovate Britain's run-down industry is taxed away to support welfare programs.* The (London) *Economist* grimly puts it this way:

"The importance of the function of saving has only been discovered now that the means of saving have largely been destroyed."

Our own Federal and State governments, too, have dangerously whittled away incentives. They have more than tripled tax rates on personal and corporation incomes in the last twenty years. Now, the President proposes to do more whittling.

If the United States is not to go Britain's way, we must preserve our incentives to save and to invest in industry.

If the United States is to progress, we must continue to build up our industries.

The President's Economic Advisers say we can slow down. But the McGraw-Hill survey of "Business' Needs for New Plants and Equipment," reported in the previous editorial in this series, produced facts to the contrary. It showed that industry *now* plans—*if it can get the money*—to spend $55 billion in the next five years for new plants and new tools. Moreover, it showed *industry's needs* for new facilities are large.

By cutting down the incentives to save, by giving soothing advice that we do not need to save so much, Washington is pushing us toward Britain's way—the route via industrial stagnation to socialization.

Before we skid too far, we should pull up short and ask ourselves: Do we want to go Britain's socialistic way?

There still is time to say, "No."

A complete report on our national survey, "Business' Needs for New Plants and Equipment," may be obtained by writing McGraw-Hill Publishing Co., 330 West 42nd St., New York 18, N. Y. This is the fifth editorial of a special series on industry's needs for new plants and equipment.

James H. McGraw, Jr.

President, McGraw-Hill Publishing Company, Inc.

TEXTILE Equipment NEWS

Frame Stop Motion Improves Roving Operation

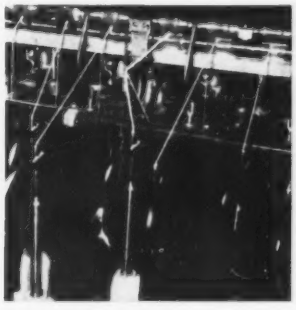
A new and simple roving-frame stop motion has been developed by and is available through S. J. Adams, Abbeville, S. C. The stop motion is designed to stop the frame as soon as any defect occurs in the roving being delivered to the bobbins. The device has been successfully applied in several mills and is now ready for use on any type of frame and on any fiber or mixture of fibers.

The Adams stop motion consists of a wire with an eyelet at one end through which the roving runs. The other end of the wire goes through a slot cut in the frame directly below each front roll. The wire is mounted on a pivot just below its slit in the frame; and when no roving is passed through the eyelet, the wire is free to pivot until it rests against one side or the other of the slot in the frame. While in such a tilted position, it closes an electric circuit which shuts off the frame. When, on the other hand, the tension of the roving holds the wire in an upright position, the electric circuit is uninterrupted, so that it in no way influences normal operation of the machine.

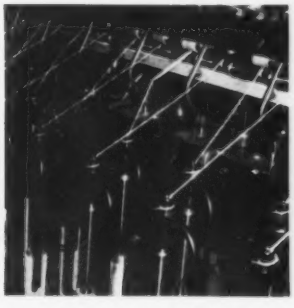
The wire used in the stop motion is

THIS ROVING-FRAME STOP MOTION STOPS FRAMES FOR:

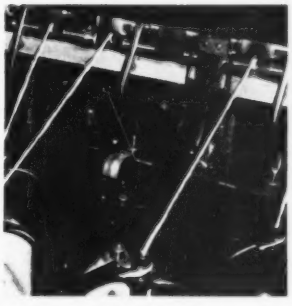
AN END DOWN OR A DOUBLING. When an end breaks or becomes slack, the drop wire will cut off the power. In case of a doubling, the frame will be stopped, for as soon as the tension which keeps the wire balanced at its center of gravity falls below a minimum, the wire will make electrical contact and stop the frame. If the tension is taken up immediately by the roving being pulled along by the running end, the angle will be sufficient to stop the machine.



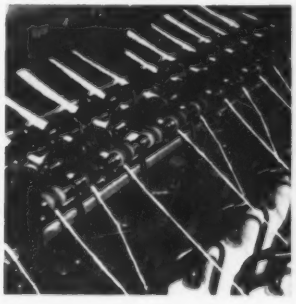
A PLUGGED FLYER. When a flyer becomes plugged, the tension will come slack, the wire will make contact with the slot, and the frame will stop. A frame with stop motion stopped 17 times due to plugged flyers compared to two stops on a conventional frame, the inventor states. The drop wire exerts no tension on the yarn.



A SINGLING MADE AT DRAWING. On a conventional frame tested with and without stop motion, using the same mix and hank roving for testing purposes, the stop motion is said to have stopped the frame 199 times for singlings from drawing as compared to nine stops due to singlings when the roving frame was not equipped.



SLIVER RUNNING OUT. The stop motion will stop the frame when sliver runs out and allow the operator to creel in a new can.



LAPPING UP. When roving begins to lap around any roll, the wire will be pulled away from its center of gravity and will stop the frame. Laps are thus stopped almost as soon as they begin, and mandrels are prevented from falling into flyers.

BAD PIECING. The frame will stop for most bad piecings from drawing. In actual tests, while the frame with stop motion stopped 38 times due to bad piecing and drawing, the same frame without stop motion stopped only five times.

designed to have its entire weight supported independently of the sliver. Since the wire does not hang down from an end, as does the drop-wire on a loom stop motion, there is no tendency for the sliver or light roving to be stretched. The manufacturer states that in spite of this light touch, the action of the wire is sure, and yet so delicate that it will act on the slightest defect in delivery.

The wires are not necessarily mounted on the frame itself; they may be mounted on a bracket positioned at any convenient spot. For each different type roving frame, an individual-type stop motion is applied; but the method of operation is the same.

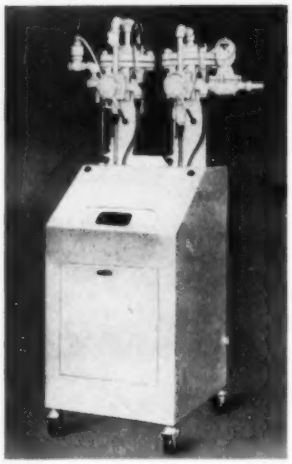
Action of the stop motion is fully automatic, and it need not be tended. If it stops the machine at any time as the result of some fault in the delivery of the sliver or in the winding of the roving, the trouble is merely located and rectified and the end rethreaded through the wire and the flyer.

When an end comes down, the frame will stop and cannot be restarted until the end causing the stop is put back up. The arrangement is such that the frame will not stop on the change, but will continue to run until the carriage has passed the point where run-overs occur. This feature positively avoids frequent run-overs. By preventing operation of the machine for so long a time after an end is down that proper tension cannot be restored during the run and by avoiding run-overs, full frame production can be obtained.

Proper roving tension is obtained automatically when the frame is adjusted to the minimum tension necessary to keep the wires in a vertical position. Unless the lay and tension are correct, the wires will not permit the machine to run. Often, on machines not equipped with the stop motion, the operator will keep too little tension on the roving so that an inferior product results; and the bobbin does not contain its full weight when wound. The manufacturer states that tests showed that the stop motion not only improved the quality of roving on the bobbin, but each bobbin contained about 10% more roving than before the installation.

It is possible, the inventor states, for an operator to handle at least one-third more sides on frames equipped with stop motions than without. Also, the roving delivered to the spinning room is said to be of such quality that ends down are reduced by at least 50%.

Chlorinator Has Unique Operating Features



BLEACHING PROCESSES using chlorine can make use of this new chlorine dispenser.

Safe, accurate, inexpensive, and mechanically simple are some of the features claimed for the new Rato-Chlor chlorine dispenser by its manufacturer, Fischer & Porter Co., Hatboro, Pa.

The Rato-Chlor dispenser is assembled from standard components, each of which is said to be particularly designed for chlorine service. It is a "dry-vacuum" chlorine dispenser which uses no water seals, bell jars, poppets, or similar devices.

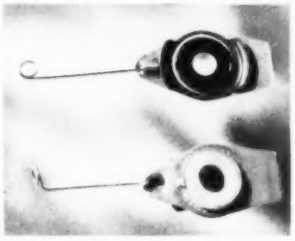
Chlorine from the cylinder, drum, or tank car is filtered first to remove gum-forming hydrocarbon impurities that might be present to cause deposits in working parts. The chlorine is then delivered to the Rato-Chlor unit at a controlled pressure of —20 in. of water. Flow rate is set by adjusting a packless needle-type regulating valve and is measured accurately by a Flowrator meter calibrated to indicate pounds per day of chlorine vapor. A differential-pressure regulating valve completes the flow-control element that maintains the preset rate of flow constant. Vacuum is created by an ejector and kept uniform by a vacuum regulating valve. The ejector also mixes a dilute chlorine-water solution which it discharges, through a distributor, into the stream being chlorinated.

One safety feature is a vacuum-operated shutoff valve which automatically interrupts the flow of chlorine in the event of leakage anywhere in the dispenser. Chlorine flow is also interrupted when ejector supply water is shut off. Thus, the Rato-Chlor dispenser is said to be equally adaptable to intermittent shock treatment or continuous chlorination.

The Flowrator meter can be equipped with recording or totalizing accessories to produce a continuous record of chlorine consumption and to eliminate the use of chlorine scales. It can be tied in with flow transmitters on water or sewage lines to proportion automatically chlorine flow to main-line flow variations. Such proportioning instruments also produce a dual flow record, making additional flowmeters unnecessary.

The new dispensers are produced in 17 standard sizes ranging from a minimum capacity of 10 lb. per day to a maximum capacity of 7,500 lb. per day. Minimum capacity is 1/10 maximum. Larger sizes and wider ratios of minimum to maximum capacity are available on special order.

Light Flyers Designed For Fine-Yarn Twisting



MANY COLORS are available for distinguishing these light flyers for five yarns. They have nylon-plastic hubs.

A new series of eccentric nylon-plastic flyers for very light tensions in twisting of nylon or low-denier rayon yarns has been developed by Herr Mfg. Co., 318 Franklin St., Buffalo 2, N. Y. The flyers have been designed to be as light as possible but to be strong enough to stand the abuse of the yarn while running. The flyer will control tension and ballooning and is said not to permit the yarn to kink when the machine stops.

The flyers are supplied in a wide range of colors, including red, blue, green, yellow, white.

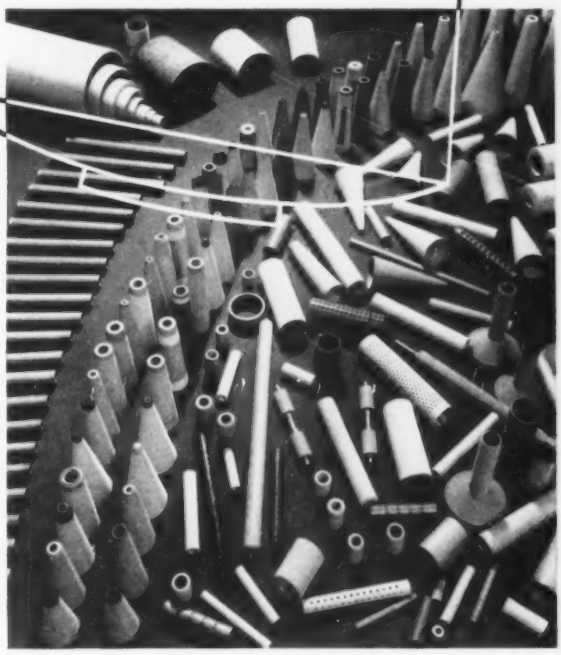
Strapping-Tool Mount Keeps Equipment Handy

A new Acme E5 universal tool mount, for flexible mounting of steel-strapping equipment, has been developed by Acme Steel Co., 2840 Archer Ave., Chicago 8, Ill.

The streamlined tool mount has rubber casters for easy portability and four leveling screws on the base for

NEW

For throwsters of SYNTHETIC YARN



SONOCO 3° 51′

A recent SONOCO development—the 3° 51′ cone is a large diameter, heavy duty cone designed to permit a larger package for throwsters winding synthetic yarns. Available in Velvet Surface or Unitex (Flocked) Surface, colored lacquer tips or burnished nose.

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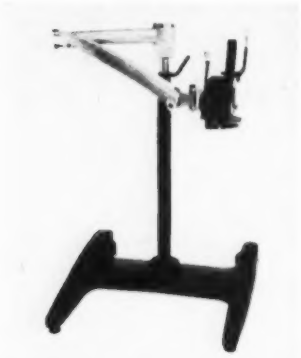


MUCH HANDLING of strapping equipment can be eliminated by use of the new flexible tool mount.

eliminating wobble on uneven floors. The mount has a 17-in. vertical movement without post adjustment, a post-adjustment of 21 in., or a total of 28 in. of vertical movement. The center post is spring-mounted for easy adjustment when the package is not within the range of the 17-in. vertical movement.

The strapping tool can be used in a 360° circle around the post, facilitating cross-strapping. The mount is designed for all models of Acme Steel-strappers and can be mounted on the floor without a base, or attached to conveyor or strapping table. Delivery is immediate.

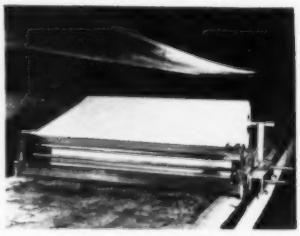
Centralized Lubrication Available on Reiner Tricot

A high-pressure, metering and filtering lubrication system is now standard equipment on the tricot-knitting machine produced by Robert Reiner, Inc., Weehawken, N. J. A pump and reservoir are mounted on the machine; the pump is driven from the cam shaft. The pump delivery is adjustable and supplies a metered quantity of oil at predetermined intervals to the Oilite bushings in all bearings of the knitting-element shafts, as well as to the cam rollers and other moving parts of the machine.

Oil is also metered to the pattern-wheel drive, take-up, guide-bar lift, and other mechanisms of the machine.

The system minimizes the hazard of inaccurate and irregular lubricating and the danger of staining cloth. Since it is a closed system, lint cannot enter the lubrication ports and absorb oil. Since the machine lubricates as it runs, non-productive time for maintenance, as well as maintenance costs, are said to be reduced.

Cloth-Adhering Machine Speeds Screen Printing



A 50% INCREASE in production is said to have resulted from use of this cloth-adhering machine and its special Thermo-Glue.

A new cloth-adhering machine which makes use of a Thermo-Glue for adhering fabric to screen-printing tables has been developed by York Machine Development Co., Rifton, N. Y. Operation of the machine in several plants is said to have resulted in a superior print job and 50% additional production without use of additional space or employees.

The machine moves down the printing table unrolling and adhering the fabric as it passes along. The adhesive, Thermo-Glue, eliminates the use of pinning, and underpinning, or wax. The adhesive is said to have a non-tacky surface that does not accumulate dust or dirt. The composition of the material is such that nubs and novelty weaves (as in rough homespuns) can be easily adhered without injury to the undercoat, the manufacturer states.

Tests are said to have shown that one application of Thermo-Glue did not lose its qualities after 800 adherings. An additional advantage is that back grays can be reclaimed by washing when necessary.

Coating time for a 60-yd. table is said to be about 1 to 2 min. Cloth-laying time is not increased.

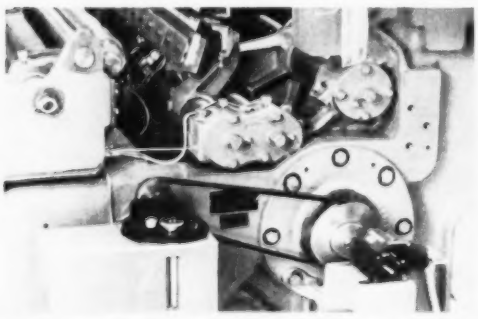
Komet Links-and-Links Produces Infants' Socks

A new-type Komet links-and-links machine for knitting infants' hosiery has been developed by Scott & Williams, Inc., 350 Fifth Ave., New York 1, N. Y.

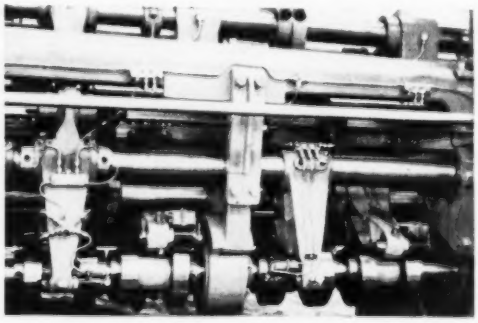
This machine brings to infants' hose the patterns which have been a strong sales stimulant in men's, women's, and children's hosiery. In addition, these new Komet machines produce many rib combinations in both the tops and boots of half-socks and anklets. Size range covered by the new infants' Komet links-and-links is from 4 to 6½.

The machine has a 2¼-in. diameter, and 160 needles. The machine is 29.7 gage, needles are 54 gage. The pilot machine has double feed in top, leg, and foot.

Most of the recent improvements in the larger-size Komets have been incorporated in this newly developed machine. Such improvements include

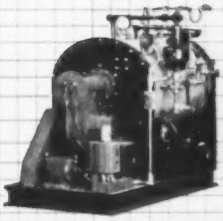


A PUMP AND RESERVOIR are mounted on the tricot-knitting machine. Pump is driven from the camshaft and . . .



OIL IS METERED across the machine to cam rollers, cam-surface oilers, rocker arms, connections, bearings, etc.

LITTLE GEM



or

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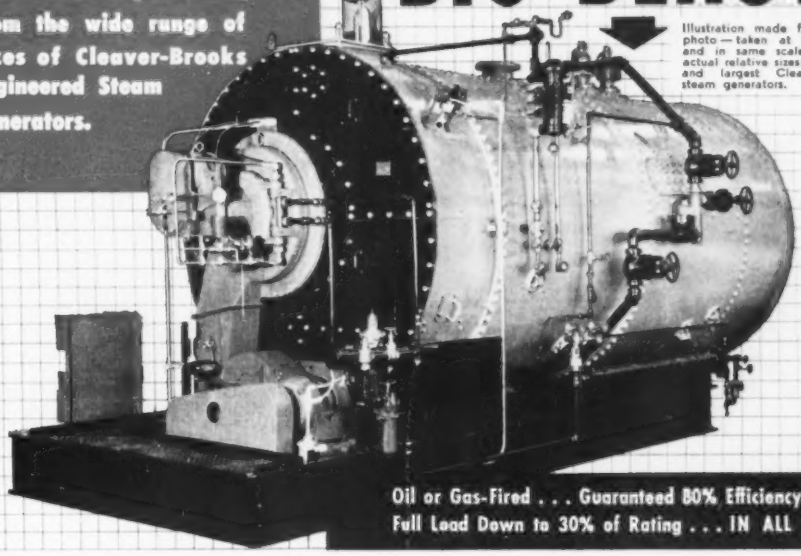
Illustration made from actual photo — taken at same time and in same scale — showing actual relative sizes of smallest and largest Cleaver-Brooks steam generators.



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Equally important—you get Cleaver-Brooks guarantee of at least 80% efficiency from full load down to 30% of rating — with either gas or oil as fuel — and IN ALL SIZES.

Cleaver-Brooks steam boilers enable you to burn the available fuel in your area — give you clean, smokeless operation — eliminate fuel and ash handling — need no high or costly stacks — no special foundations — fit under low headroom and into limited space — provide flexible operation to meet fluctuating loads — fully meet all codes.

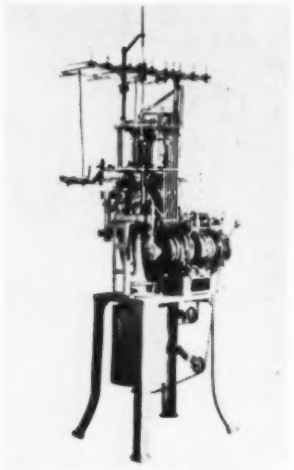
Available in a size to fit your needs — 15 to 200 p.s.i., 15 to 500 hp. — write for Cleaver-Brooks Steam Boiler bulletin.

CLEAVER-BROOKS COMPANY, 370 E. Keefe Ave., Milwaukee 12, Wis.

WRITE on your business letterhead for Free Steam Cost Calculator — a ready reference slide rule showing the comparative steam costs when using oil, gas or coal as fuel.

Cleaver-Brooks

HAVE SERVED INDUSTRY FOR MORE THAN FIFTEEN YEARS



FEATURES of Scott & Williams regular Komet machines have been built into this infant's socks machine, some with improvements.

INFANT'S SOCKS can now be produced in links-and-links patterns.

eyelet closing, the quick change from single to double feed, and the safety-chain racking mechanism to reset the chain automatically when it is stopped for any reason. It has been necessary, however, to redesign the mechanisms in many cases to adapt them to the 2¼-in. size. Tipped heel and toe, draw thread, and double patterning are also included.

In addition, the 2¼-in. Komet links-and-links has an adjustment of the second feed stitch cam which is much more accessible than heretofore. An improvement in the verge is designed to prevent the yarn from being drawn over it and to make yarn changes easier.

A nineteenth step on the links-and-links selectors is used to provide greater safety and to relieve the slider from being used to push the selectors back into position. This feature is said to save wear and tear on the stitch and raising cams.

Tentative production is calculated at eight dozen per 8-hr. shift, depending, of course, on size, yarn, and style. Deliveries are expected to start in mid-1949. The company also plans to build a machine for 48-gage needles.

Herringbone-Hump Reel Promotes Better Dyeing

A new type of stainless-steel herringbone-hump reel for piece-dye kettles has been developed by James Hunter Machine Co., North Adams, Mass. The reel consists of a stainless-steel shaft and the usual head on each end with connecting bars running between. Welded to these connecting bars are rows of curved stainless-steel rods. These rods are placed at an angle with the axis of the reel and with each row made alternately right and left hand. The unique herringbone design of the reel is especially effective in opening all types of cloth, due to the undulating action on the cloth as it passes from hump to hump. This action is said completely to eliminate chances of the goods running in one fold with resultant streaks and kettle cracks, as well as to eliminate channeling likely to occur in some types of hump reels. The new reel is available on all new kettles and can be installed on existing kettles of various types of manufacture. The reel can be made in practically any diameter, or in elliptical form for use on rayon piece goods.

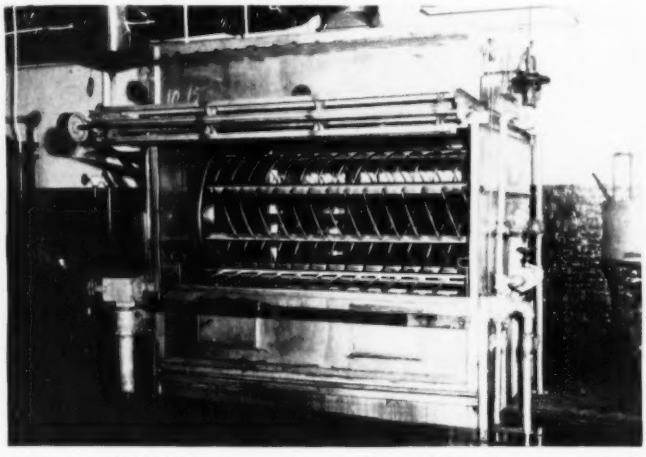
The reel has been thoroughly tested in mills during the past year and a half, the manufacturer states, and has proven entirely satisfactory on all fabrics tested so far, including lightweight (7-oz.) tubular knit goods, 11-oz. blends, gabardines, and goods weighing as much as 32 oz. per yard. The reel has been found particularly valuable in dyeing gabardines in which an opening action of the cloth is desirable and where it is essential that the goods do not slip. Mills using this reel on a wide variety of fabrics feel that it is a universal reel for all of the fabrics which would be run in a woolen or worsted mill, the company states.

Hand Perch Has Aluminum Measuring Roller

ACCURATE YARDAGE MEASUREMENT is claimed for this perch, which has an aluminum measuring cylinder.

A new hand cloth perch, manufactured by Standard Mill Supply Co., P. O. Box 1534, Providence, R. I., and said to accommodate any kind or width of cloth, has a measuring cylinder made of cast aluminum with a sand-blasted surface. The new surface eliminates the old method of covering the measuring cylinder with emery grits, sandpaper, rubber, or cork fillet, thus reducing maintenance upkeep.

The measuring cylinder is accurately turned to a circumference of 24 in. Standard equipment is a five-figure,



CLOTH IS UNDULATED from hump to hump in this new dyeing reel; it prevents streaks and cracks.

Right for fast application...for economy

Right for years of whiteness

RIGHT FOR MILL VILLAGES!

What do you look for in a mill village paint . . . fast, easy application? Excellent hiding and coverage? Years of good looks? You'll find all of them, and more, in Du Pont No. 40 Outside White.

Du Pont 40 saves you money right from the start . . . through smooth, easy application, solid hiding and exceptional coverage per gallon. All of this adds up to less time on the job, lower labor costs per unit.

Du Pont 40 is intensely white at the start and it *stays* white, through years of exposure . . . your village looks better, longer. That means improved employee morale, and better maintenance of your property.

In addition to better appearance, "40" gives you a surface at repaint time that is ready to take new paint, with a minimum of preparation.

Yes, check the advantages you want in a mill village paint, and you'll find Du Pont 40 is RIGHT. Why not let a Du Pont maintenance painting expert go over your requirements with you? Write E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Dept. TW-94, Room 7010 Du Pont Building, Wilmington 98, Delaware.

DU PONT
REG. U. S. PAT. OFF.
PAINTS
BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

hand-lever, quick-reset Productimeter counter calibrated in ¼ yd., mounted on the right side of the measuring cylinder. Two wooden guides or tension rolls are included.

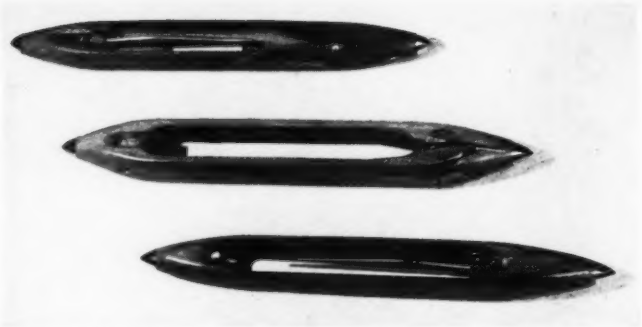
A measuring clock with hand-lever reset can be furnished to include a printing attachment for recording the exact yardage of each individual piece on a piece ticket. This attachment can eliminate errors by transposing yardage figures formerly written in by the operator.

Weaving Accessories Have Extreme Hardness

A new line of shuttles, picker sticks, treadle blocks, bobbins, and other products, made of Lignostone, a compressed-wood product of the Netherlands, is available in the U. S. through Techno Exports, Suite 1016, 25 Broadway, New York 4, N. Y.

The shuttles offered are said to outlast a regular wooden shuttle. Depending on handling and on the condition of the loom, shuttle life of two to three years is claimed.

Lignostone is basically beachwood which has been compressed and chemically treated under heat to give an extremely compact structure. Up to five times the hardness and double the elasticity of the original wood is claimed. The wood has a natural appearance, but is said to be moisture- and oil-resistant and to lack irregularities of natural woods, since all fibers are locked together and pores closed. Specific gravity of Lignostone is about 1.35. Tests are said to have shown that hardness of Lignostone exceeds that of tin and aluminum. Dry grinding tests have shown that lignum-vitae wears three times faster than Lignostone, the company claims; and elasticity of Lignostone are said to impart greater wear and shock resistance to the shuttles and other products. All types of shuttles are available. Cost is said to be comparable to or less than regular shuttles. Delivery will start in a few months.



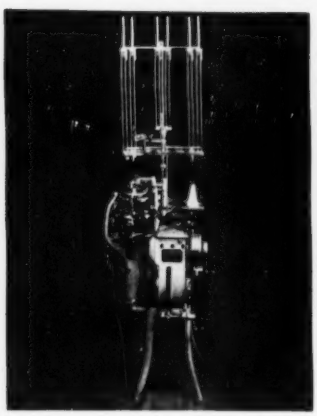
EXTREME HARDNESS and shock resistance are claimed for the material used in these shuttles.

New Precipitron Is All Aluminum

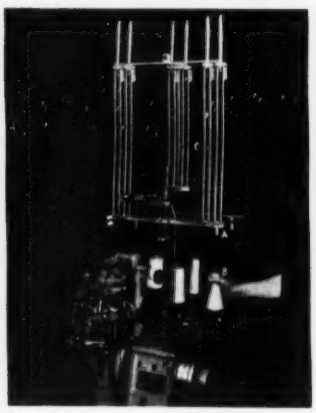
Development of an all-aluminum model of the industrial Precipitron, designed to handle a 40% greater volume of air than previous units of the same size, has been announced by Sturtevant Div., Westinghouse Electric Corp., Boston, Mass.

There are 99 plates in the new model, compared to 111 in the old, but 3 in. of additional length in each plate gives the new unit 17% more

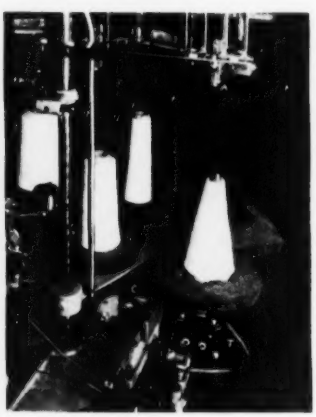
Stop Motion Leaves Obstructed Yarn in Threaded Position



A NEW STOP MOTION, the Wesco 400, developed by Stop-Motion Devices Corp., 1471-77 Fulton St., Brooklyn, N. Y., is shown here mounted on a Scott & Williams Model K machine. Each end of the stop motion is individually adjusted to accommodate different weights of yarn. The stop motion can handle yarns from 10-den. nylon up.

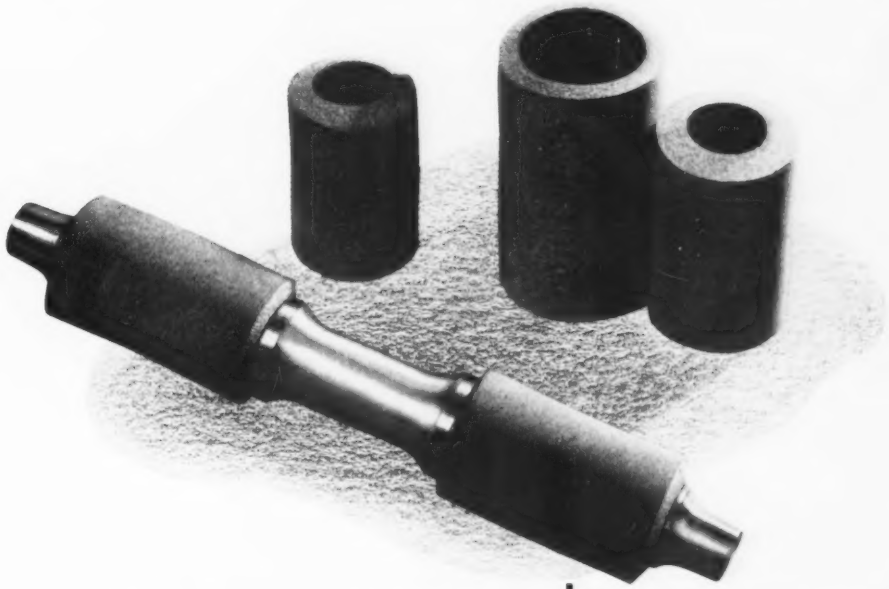


YARN REMAINS THREADED when a hindrance prevents the free flow from the cone. The hand above is preventing unwinding from cone B. Slide C is pulled down, stopping the machine. Yarn thus does not fall on the machine and become entangled. When obstruction is removed, slide C returns and machine is ready to operate.



IF A BREAK OCCURS in the yarn, end-detector A stops the machine. Controller C is compact and easily mounted with drilling or tapping. Transformer T, mounted with one screw, provides 12 v. to operate the stop motion. An electric light on the top-center bar signals when the motion stops the machine for any reason.

No more eyebrowing

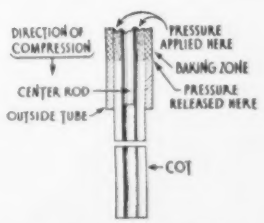


Armstrong's Cork Cots carry waste well back onto the clearer boards where it cannot form eyebrows and be nipped into the work. They reduce clearer waste as much as 50%. Thus you minimize clearer picking and have fewer slubs in the yarn when you spin on cork.

Cork's extra friction also helps produce a more even and therefore a stronger yarn. Cork's resilience further means fewer ends down. Your operators do less piecing up. Cork recovers quickly from hard ends and roll laps. It will not flatten during shutdown periods or flow under roll weighting.

Ask your Armstrong representative for samples, prices, and additional information. Or write Armstrong Cork Company, Textile Products Department, 8304-A Arch St., Lancaster, Pa.

Extrusion Process Produces Seamless Cork Cots



Armstrong's Extruded Cork Cots have no structural weakness to cause premature breakdown. Each cot is uniform in density from inside to outside, from end to end. Each compresses evenly, spins stronger yarn.

ACCOTEX IS A REGISTERED TRADE-MARK

Better running work . . . more poundage

ARMSTRONG'S CORK COTS

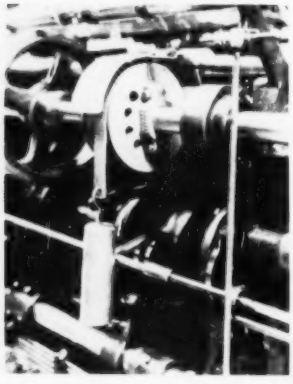
ACCOTEX COTS • ACCOTEX APRONS

dirt-trapping area. This extension in the direction of air flow gives the new Precipitron its ability to clean 10% more air than previous models occupying the same space.

The new Precipitron will be built in two sizes: one 36 in. wide, the other 24 in. wide. The larger unit can clean 1,000 cu.ft. of air per min.; the smaller one 667 cu.ft. Installed in conjunction with ventilation systems, the cells are stacked in tiers according to air-cleaning needs.

The 36-in. aluminum cell weighs 50 lb., or 65 lb. less than the old cell for the same capacity. This lighter weight, combined with improvements in the frame and body construction, makes the unit easier and less expensive to install. Simplifying and revamping the layout of the plates and dust-charging section will make possible substantial savings in the cost of flushing the collected dust from the plates.

Back Stop Prevents F. F. Machines Backing Up



NO BACKING UP of full-fashioned machines while stopped is claimed for this inexpensive device.

A new back stop said positively to prevent backing up by a full-fashioned machine when it is stopped by the operator during knitting has been developed by H. B. LeFeaux, 5035 Bradford Drive, Dallas, Texas. Mr. LeFeaux is a consulting editor for TEXTILE WORLD. The unit consists of only five parts, a band clamp which fits on the presser shaft, a drum which clamps on the handwheel shaft, a brake band attached to the band clamp and looped around the drum 1¼ turns, a weight hung on the end of the brake band, and a guard mounted on the front of the band clamp.

The unit can be installed on the machine in 20 min., the inventor states. After installation, no maintenance or adjustments are required.

The unit is especially designed to be used on Reading machines. Price is $31.00.

Dry-Heat Machine Sets Thermoplastic Fabrics

A new heat-setting machine for nylon, acetate, acrylic fiber, and similar products has been developed by Morrison Machine Co., Paterson, N. J.

The machine is gas fired, totally inclosed, and has devices for safety as well as accurate control of speed, temperature, and exposure time. The machine is designed to handle the finest sheer fabrics or the heaviest weight duck at practical production speeds.

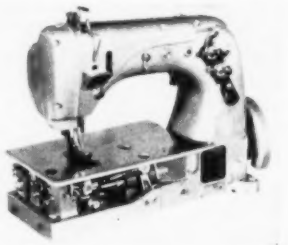
It is claimed that tests have clearly indicated that the heat setting of nylon fabrics on this new machine improves both their resilience and crease resistance. Moreover, these properties are not destroyed by subsequent laundering and ironing.

Various other valuable nylon-fabric characteristics have been obtained, the company states, such as improved dimensional stability including virtual elimination of shrinkage, elimination or reduction of tight places from weaving, and a softer and more velvety feel than the fabric had in the unset form. These characteristics have all been produced without weakening the inherent strength of the nylon yarn which is used.

The setting is done by high-velocity dry heat. Products of combustion are exhausted along with other residue.

The original machine was designed and built by the Fair Lawn Finishing Co. of Fair Lawn, N. J.

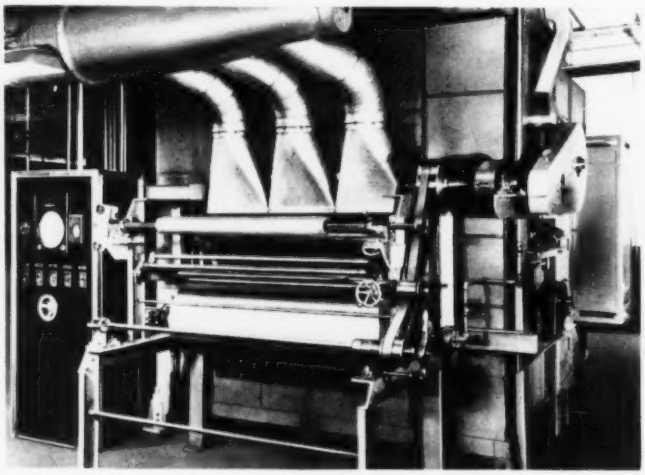
New Machine Introduced For Heavy-Seaming Work



HEAVY MATERIALS can be sewn by this new machine which has several new design features.

A new machine, Style 53700 A, for handling heavy-seaming work, has been developed by Union Special Machine Co., Chicago, Ill. The new machine makes the single-needle, type 401, double-locked stitch and is especially suitable for work on upholstery and other heavy materials. It is distinguished by the fact that it has top and bottom feeds which operate together, the top feed being driven through the medium of an upper rocker shaft. This type of feed is known as a "top running feed" and is positive in its action.

The new machine is streamlined in appearance and provides the same amount of underarm working space

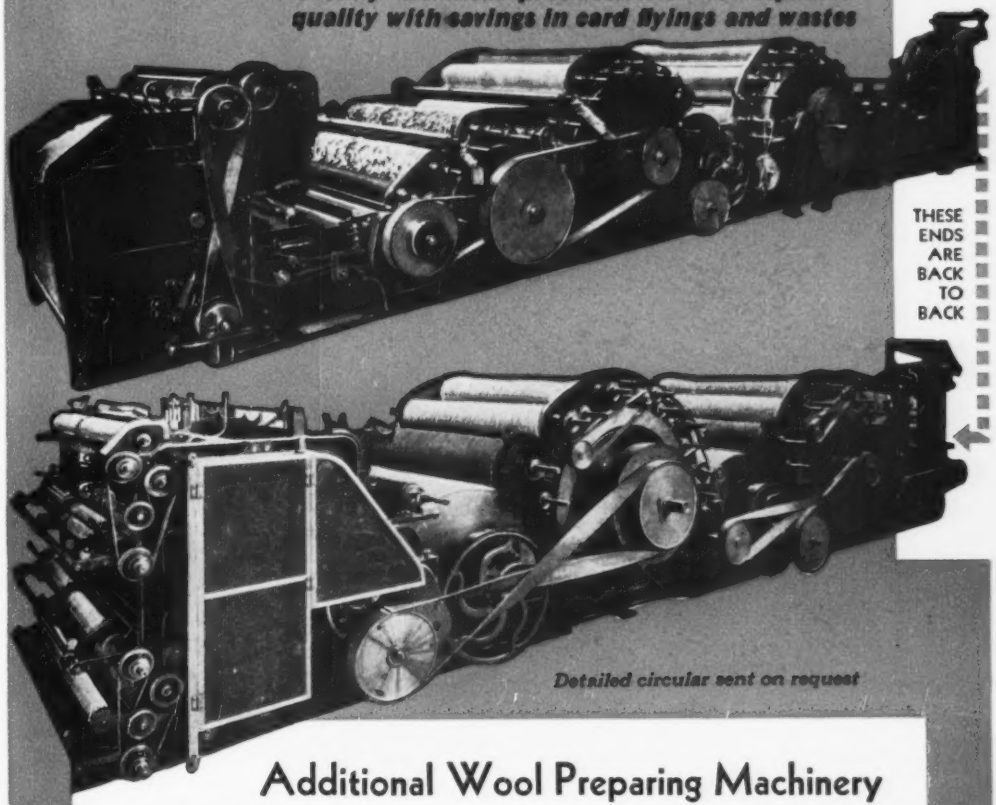


IMPROVEMENT in many properties of nylon fabric is obtained by use of dry-heat treatment.

Duesberg-Bosson Woolen Cards

for the manufacture of Fine, Medium and Carpet Wools

Greatly increased production . . . Improved quality with savings in card flyings and wastes



Detailed circular sent on request

Additional Wool Preparing Machinery

Oiling Device • Mixing Picker (Fearnaught Type)
Picker Feeders • Automatic Card Feeders
Patented PERALTA Machine
Intermediate Center Draw Broad Band Feed
Tape Condensers
Woolen Cards with Two, Three and Four Cylinders

Duesberg-Bosson of America, Inc.

FITCHBURG, MASSACHUSETTS

that has been standard in the "Fifty-Thousand Series" machines. Lubrication is semi-automatic through the use of one reservoir that provides oil for the entire lower portion of the machine. In the upper lubricating system, the top-needle-lever connecting rod is lubricated by splash oil from the lower-column reservoir. The only manual lubrication required is for the upper feed mechanism at several accessible points, and this oil is carried to internal points by means of small wicks.

Curtains of Air Combat Lint and Fly

A pneumatic device designed to combat dust and fly on winding machines is available from Sturtevant Engineering Co., Ltd., 196, Deansgate, Manchester, England. The device is said to keep dust and fly away from operators by interposing a curtain of air through which fly cannot pass. The stream of air is directed in a plane roughly parallel to the sides of the machine, and is said to have no propelling action on dust and fly in the air.

The apparatus consists of tubes with small, equally spaced circular holes throughout their length. The tubes are fitted to the machine above the winding level.

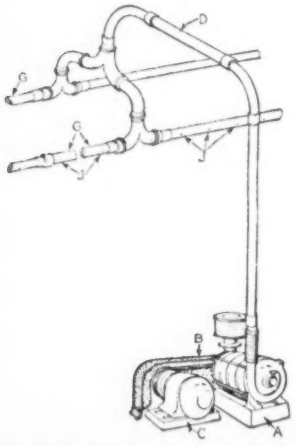
The air blower consists of a multistage turbo-blower driven from an electric motor by V-belt. Filtered air is delivered under pressure to tubes which feed the horizontal mains running the length of the machine on either side.

The degree of outward inclination of the outlet holes is, of course, a matter of individual adjustment in the mill. In one case, an inclination of some 19° to the vertical is said to bring the air curtain into a plane approximately parallel to the source of dust and fly.

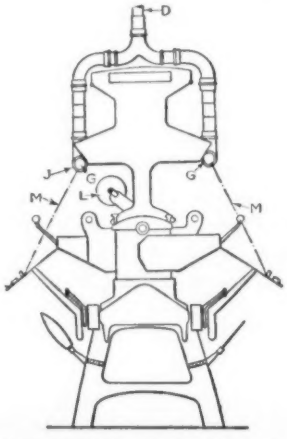
The system is said to be economical in the use of power and compressed air. It is so designed that the air supply can be cut off at any point where the yarn breaks or the mechanism stops.

The system has been installed in the Lancashire firm of R. Greg & Co., Ltd., South Reddish, England.

The system is said to be applicable to equipment other than winders on processes in which the dust and fly problem is encountered.



AIR IS PUMPED through perforated pipes extending the full length of the frame on each side.



AN AIR CURTAIN (M) is placed by the pipes between the spindles and the operator of the machine.

Plastic Tubing Holds Yarn Moisture Content

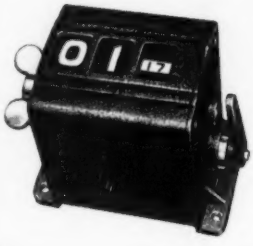
Product air conditioning is brought from throwster to customer by the Sauquoit Silk Co., Scranton, Pa., by using Plaxpack in the form of Layflat tubing, for packaging cones of nylon and other yarn. Plaxpak is a product of Plax Corp., Walnut & Edward St., Hartford, Conn.

Cones of yarn are inserted between the walls of the flexible material. The tube is cut to length, and the open ends are heat-sealed. Sauquoit uses the tubing in various widths, depending upon the size of the cone.

The Sauquoit Co. has found plant air conditioning conducive to good workmanship and high quality. The low moisture transmission rate of Plaxpak, a polyethylene film, is said to preserve indefinitely moisture and cleanliness inside the package as they existed within the throwing plant. The material is said to have proved especially valuable for export shipments.

HEAT-SEALED TUBING of plastic is used by Sauquoit Silk Co. to preserve moisture content and prevent damage in shipping of cones.

New Counter Checks Dozens



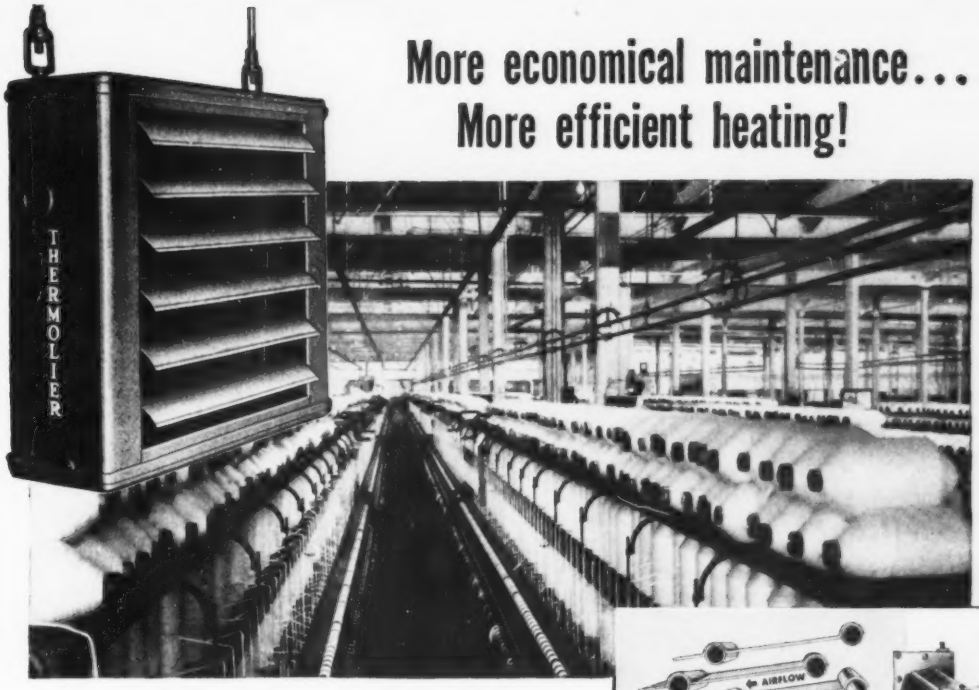
A NEW "DOZENS" COUNTER designed for use in hosiery and glove mills is being produced by Veeder-Root, Inc., Hartford, Conn. The counter gives inspectors a ready and accurate means of counting individual stockings and dozen pairs, and may be either hand-operated or machine-actuated. The counter should be highly useful at inspection, doffing, or on the knitting machine itself.

Italian Woolen and Cotton Machinery Available In U. S.

A two-cylinder worsted card, a cotton card, and a French comb, all manufactured by Rumi Fonderie of Italy, are now available in this country through Rostan Machinery & Equipment Co., 75 West St., New York 6, N. Y. A set of the French combs was recently installed by Kent-Hampton Co., Clifton Heights, N. J.

The worsted card is equipped with an automatic feedbox, a breast, and a

More economical maintenance... More efficient heating!



with the self-cleaning

TEXTILE THERMOLIER

Incorporating all the features that have made the standard THERMOLIER a leader, the new TEXTILE THERMOLIER banishes the problem of clogging and loss of heating capacity, and cuts cleaning to almost nothing.

TEXTILE THERMOLIER proved its superiority in this actual weave room test. A conventional unit heater clogged solid in four days . . . its heating capacity was lost as clogging increased . . . finally it had to be shut down for a prolonged cleaning period. After three weeks of operation, TEXTILE THERMOLIER showed negligible accumulation . . . it was quickly cleaned with an air hose.

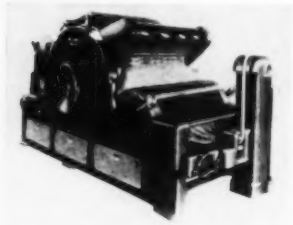
Cutaway: view of heating element showing unobstructed air flow passages (drawn to exact scale)

- Free flow of air self-cleans the heating surfaces. Lint, fly and dirt sweep clean from horizontal trailing edge.
- Maximum capacity provided at all times and annoying and destructive water hammer eliminated because built-in pitch of tubes and internal cooling leg assure continuous drainage of condensate.
- Safety and durability assured with leak-proof tube-to-header construction.
- Plain thermostatic trap, the simplest and least expensive kind of trap, made practical because of Thermolier's exclusive internal cooling leg. Write for the full story.

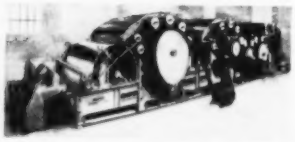
99 YEARS PIPING

GRINNELL

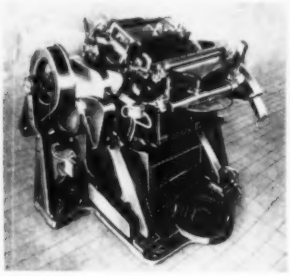
Grinnell Company, Inc., Providence 1, Rhode Island. Branches: Atlanta • Buffalo • Charlotte • Chicago • Cleveland • Cranston • Fresno • Kansas City • Houston Long Beach • Los Angeles • Milwaukee • Minneapolis • New York • Oakland • Philadelphia • Sacramento • St. Louis • St. Paul • San Francisco • Seattle • Spokane



ROUNDED DESIGN of the exterior covering is a feature of this Italian cotton card.



A TWO-CYLINDER worsted card has four workers and strippers on each cylinder.



HIGH PRODUCTION of 130 to 300 lb. per hr. is claimed for this Italian-made French comb.

Morel-type burr remover. The breast is covered partly with garnett wire and partly with metallic wire on a leather foundation. Each cylinder has four workers and strippers and a burr-removal attachment. Width of the card is about 51 in.

The comb is a single-head, rectilinear (Heilmann) type which can be fed up to 24 slivers. The circular comb has a diameter of about 6 in., and is covered with 18 rows of needles. All movements in operation are said to be smooth and silent.

Production claimed for the comb varies according to the grade and type of wool, between 140 and 300 lb. per 10 hr.

The cotton card has a fully inclosed cylinder and smooth, rounded-corner covers over all other mechanisms. All shafts are ball-bearing mounted. Adjusting points for both lickerin and cylinder grids are said to be conveniently located for ease and speed of adjustment. All other control mechanisms are grouped at the front of the card.

Electronic Protection Motion Eliminates Harsh Bang-Offs

Teeth-jarring bang-offs associated with operation of conventional protection motions are eliminated, in an improved F-2 felt loom, by a new electronic device developed by Crompton & Knowles Loom Works, Worcester, Mass. The new motion is essentially a device that stops the loom by electronic means in case a shuttle fails to box properly, or is improperly timed or picked. The loom can be stopped within two revolutions of the motors, or within 5° of a crankshaft revolution. The electronic stop motion is one of several improvements made in the F-2 loom, including a new let-off, and a pushbutton starting, stopping, and jogging control.

Winder Creel Holds Six Cones or 12 Bobbins

A new Halo magazine creel has been developed by Muschamp Taylor Ltd., Vulcan Works, Pollard St., Manchester, England. The creel is applicable to automatic and non-automatic bobbin winders and doubling machines. Up to 12 cops or ring bobbins or six cones tied tail to tip can be accommodated, which means that 12 bobbins or six cones will run off before the machine stops. It is not necessary to wait until this creel is empty before adding new bobbins or cones; this can be done while the machine is running.

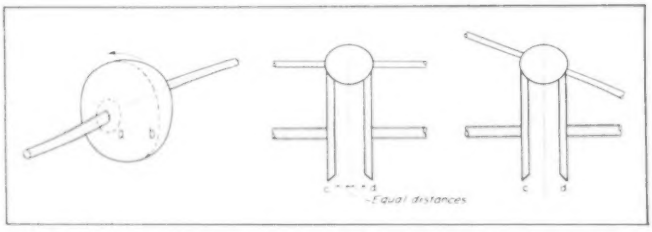
The creel is wheel-shaped, and has a number of spindles pointing to the center. The yarn passes through 2 circular thread guides situated in the middle of the creel.

The creel can be turned around by hand, and the whole creel is hinged so that it can be pulled down by the

(Continued on page 276)

Unique Principle Used In New Variable-Speed Unit

THE KOPP VARIABLE-SPEED unit will soon be manufactured in the U.S. according to Atkinson, Haserick & Co., 211 Congress St., Boston, Mass., representatives of Jean E. Kopp, Berne, Switzerland. Here it is shown direct-connected to a motor. It has also been applied to the front roll of a gill box.



MOUNT A BALL ON AN AXIS, and rotate it. The surface speed at point a will be lower than at point b. Surface speed increases at any point on the ball along a line from the axis to a point at the largest circumference of the ball.

PUT THE BALL BETWEEN TWO PLATES, as shown, with plates c and d touching at points equidistant from the greatest circumference of the ball, and the plates will revolve at equal speeds.

TILT THE AXIS and keep the plates in contact with the ball the same distance apart. Now plate c will revolve faster than plate d because of the difference in speeds on the surface of the ball.

THESE PRINCIPLES are used in the Kopp variable-speed unit to provide a wide range of speeds. Plates are ball-bearing races held by pressure at a constant distance in contact with balls. Handle varies angle of ball axis.

It's the EASIER way

It's the FASTER way

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LAUNDERABLE SWEEPING MOP

Both Sweeps and Dusts . . .

A dual-purpose sweeping dry mop . . . serves both as a floor brush and a dusting mop. Fully washable. All in one piece. Easy to remove. Zipper opening eliminates tape ties. Four-ply cotton yarn has long trim to cover large floor surfaces. Send for complete specifications.

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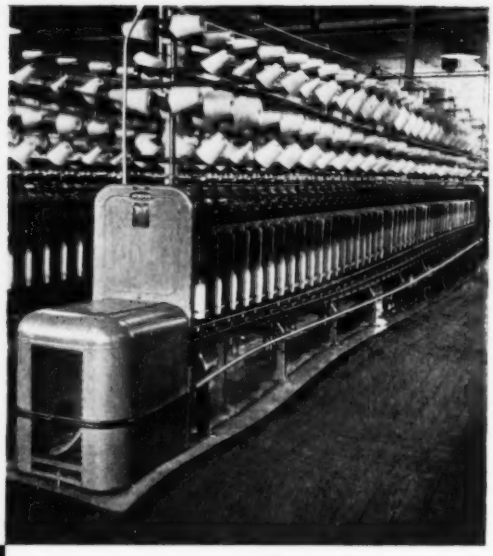
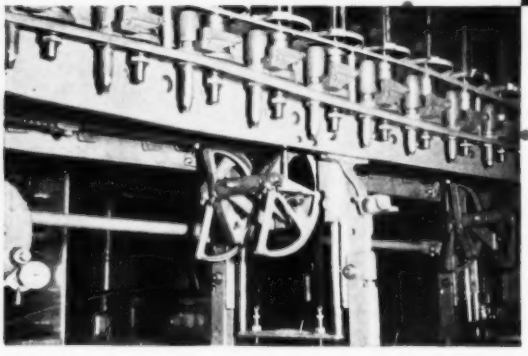
It Twists

NATURAL AND SYNTHETIC YARNS



The Atwood Model 10 Ring Twister is a completely modern machine, sturdily constructed, and designed to produce plied yarns of cotton, woolen and worsted; spun rayon, filament rayon, nylon and combination yarns. Around a basic design that has proved highly successful over the years, the machine has been redesigned for smoother running, reduction in maintenance, and greater ease of operation.



The sturdy lifter rods, designed with oilless metal bushings, assure smooth ring rail traverse and require a minimum of maintenance. One long-wearing endless, lapless belt for all spindles, eliminates sewing or tying of tapes. Automatic stop motion for each end and ply prevents roller laps and allows piecing up of single ends. Knee brakes are eliminated.

With a Sharp Eye on Costs

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Model 10 *automatic stop motion for each end and ply*

How the Management Team Can Build Better Human Relations

By GLENN GARDINER

JOB SATISFACTION
Can Build Job Interest

Pointers FOR SUPERVISORS

HIGHLIGHTS: *Cooperation and initiative cannot be bought but must be built—Causing a good first impression and fitting worker to job are important—Keeping rules and regulations at minimum can help.*

ONE BROTHER was crazy about school. The other and younger one was, to put it mildly, considerably less enthusiastic.

GLENN GARDINER

One day, the older brother suggested, "Let's play school."

"All right," replied the younger one, "but let's play I'm absent."

Some workers are like that—they may be present on the job, but mentally they are absent. They seem to lack spirit and enthusiasm.

What causes such a lack of interest in the job? The answer in the majority of cases is that job satisfaction is lacking.

You can build a team of workers who are interested in their work. But it takes time and effort.

The First Impression

Never underestimate the importance of first impressions on a man when he first comes to work.

The treatment a man gets at the beginning may color his attitude for as long as he stays on the job.

Efforts to make a good impression on a new man will make it doubly easy to keep a man satisfied with his job. It is very difficult to overcome a bad first impression.

Put Workers on Right Jobs

Study each job. Study each individual. Try to assign workers to jobs they like. Psychologists have found that some people are much happier with repetitive jobs, even though they may be monotonous. Others like jobs that require some initiative.

Build Groups That Pull Together

Consider personal likes and dislikes. This may apply to employees who work in partnership, those who sit next to each other, or even just those who may be sharing a locker.

If you can interest workers in achieving a common goal, so much the better. This need not necessarily be a production goal. Perhaps it may be to have the safest department in the mill. Or the best housekeeping. Or the lowest rate of absenteeism. Such a goal will develop group loyalty.

On the other hand, the surest way to destroy group loyalty is by playing favorites. You will usually find that the supervisor who has a spirited group of workers is strictly impartial.

Understand Workers' Motives

To understand an employee, it is necessary to understand not only what his attitude is, but also what experiences may have developed this mental attitude. The motives which influence a worker's behavior may have been developed by the very treatment the supervisor has been giving him. People become indifferent about their jobs if the supervisor is indifferent about the worker.

Physical Working Conditions

Of course, physical working conditions must be made as good as the nature of the job will permit. Failure to do everything possible for the physical comfort and welfare of employees gives evidence of a lack of human consideration.

Many of the physical working conditions can be directly controlled by a man's immediate supervisor. To the

extent that working conditions come under the supervisor's jurisdiction, he should do his utmost to make them satisfactory. Workers prefer a place that is clean, orderly, safe, healthy.

Most men like to be "put on their own." They do not like to be hedged in by rules and regulations. A job that is surrounded by prohibitions and rules, with the threat of discharge hanging over everyone, is not likely to be a job that gives satisfaction.

Develop Efficient Work-Habits

The employee who is doing his work the hard way often loses enthu-

siasm for it. Study the work habits of your men very carefully. Satisfy yourself that each of them is doing his work in the simplest and easiest manner possible. Where inefficiencies are evident, spend sufficient time with the employee in question to undo the harmful effects of his having practiced mistakes until they have become habits.

Provide Opportunities to Get Ahead

A job that has the reputation of being a "dead-end" street is not apt to stimulate enthusiasm. Try, whenever possible, to promote from within the department. Show a sincere interest in each worker's development. Help workers to get ahead, even though it may temporarily inconvenience you.

You can buy a man's time; you can buy his presence on the job. You can even buy a certain amount of his skill. But you cannot buy harmony and cooperation. You cannot buy initiative and enthusiasm. These have to be created. They can be created only by human consideration that indicates a deep interest in a man's welfare and his opportunities to get ahead on the job. An employee must feel he is working in a good place and for a good supervisor. A satisfied worker is your best supervisory asset.

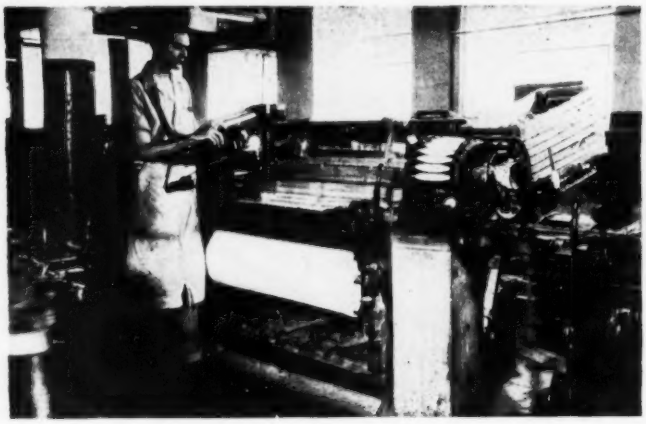
Kinks AND SHORT-CUTS

4,200 Loom-Pick Readings Taken by Reader in 5 Hr.

✻ **PRIZE WINNER FOR APRIL** (January contest)

Reading picks in the weave room and totaling them by jobs for weaver learners, weavers, and loomfixers is a fast, easy job when a portable adding machine is used as shown in the accompanying photograph. One man takes picks on 2,100 looms two shifts a day (a total of 4,200 pick-clock readings for the two shifts); totals each fixer's, weaver's, and learner's job; and keeps all pick clocks repaired. He spends about 5 hr. a day taking picks and the other 3 hr. repairing clocks.

The adding machine is mounted on a light frame made of ¼-in. rod. The rods that form each side of the frame are joined in a manner to form a triangle, with the large angle slightly greater than 90°. The crosspiece that joins the two sides of the frame at the large angles of the triangles is covered with fairly heavy leather, and the leather forms part of a belt that can be fastened around the pick reader's waist. A shoulder strap is attached to the belt in front and back of the reader to help support the frame and machine.



LOOM PICKS are read and recorded on a portable adding machine mounted on a frame and held by straps as shown here. The pick reader reads, records, and totals picks on 2,100 looms twice a day (4,200 readings) in 5 hr.

The lower crosspiece rests against the pick reader's abdomen and serves as a brace for the machine. It is bent upward in the middle so that the leather cover can be firmly attached to it and also to form a substantial support surface.

When the pick reader straps on the machine, the weight of it is distributed between the shoulder strap, belt, and brace.

Three different pay rates are used, the division being made according to the number of ends in the warp. The picks for all of the looms, regardless of warp count, are taken on the same adding machine.

A small piece of cardboard is cut to fit the pick clock, and an *R*, *L*, or *C* is written on the cardboard. One of these cardboard pieces is placed on each pick clock. If the ticket has an *L* on it, the loom has a low warp count and the operators on that loom are paid the lowest of the three rates. The pick reader enters the picks for that loom in the three left-hand columns of the eight-column machine.

If the loom has a medium warp

A $25 SAVINGS BOND FOR YOUR KINK

✻ **You undoubtedly know of some kinks and short-cuts that are helpful to mill operation. Write them down and send them in. We pay promptly upon acceptance—*before* publication. In addition, we award *every month* a $25 Savings Bond for the accepted kink we consider most useful.**

Don't delay. Don't worry about dates. Send in your kink now. There is always a Savings Bond prize contest going on!

Don't take time to polish up your writing. We'll do that. Don't waste time to make a finished drawing, as our draftsmen will take over. Just write enough details and do enough drawing (if any drawing is necessary) to make clear to the editors how your idea works and what machine or process it is applicable to. Photos can be sent.

Look over the kinks in this and other issues. They will offer you some useful ideas, and they will also suggest other ideas you can send in. We like items that pertain to ways for improving machines, new devices that a mill man can build, attachments that are of merit—anything that will help production, improve quality, or cut costs.

Writing kinks is easy. It's fun. It's profitable. Give it a try. *Now.*

RULES OF CONTEST

1. No limit to number of entries.
2. New contest every month. Each contest closes with kinks received last day of the month. Prize winner is published the third succeeding month.
3. All kinks will be paid for on acceptance. Illustrations, when submitted, do not need to be finished drawings (penciled sketches are satisfactory); but they should be clear and complete. Prize awarded to winner is sent to him after publication. Good photos are acceptable.
4. Previously published material is not eligible for prize or publication.
5. Unless you advise to the contrary, we assume that we may sign your name to your kink when published.
6. Judges of the contest are editors of TEXTILE WORLD. Their decision is final.
7. Send your entries to either address:

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330 W. 42nd St.
N. Y. 18, N. Y.

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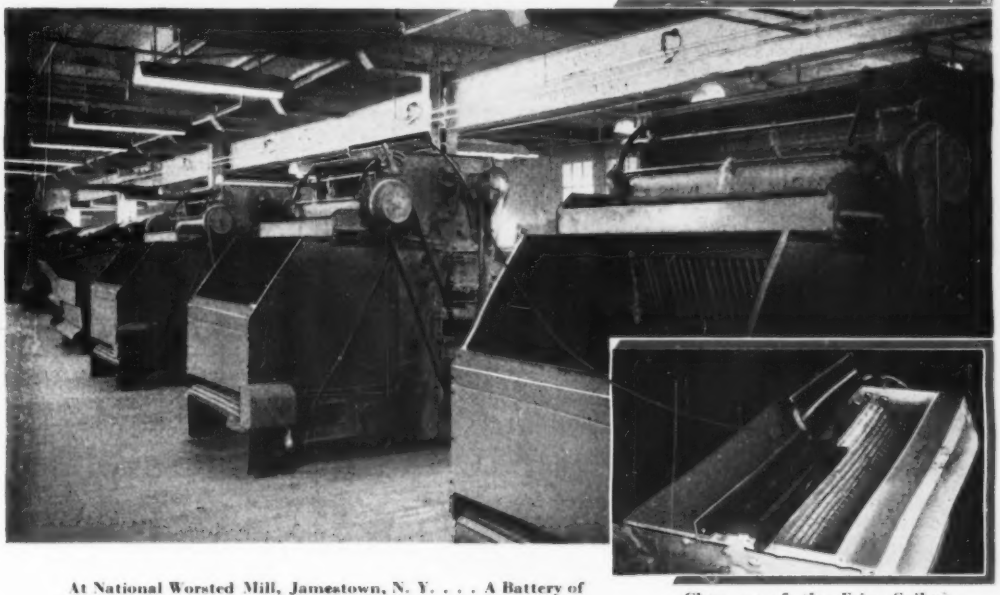
P. O. Box 1641
Columbus, Ga.

Keep them on the job-with *Eriez* Magnets



At National Worsted Mill, Jamestown, N. Y. . . . A Battery of Eriez Spiked Apron Magnets Installed Above Feeders protect Card Clothing From Damage.

Close up of the Eriez Spiked Apron Magnet. Unit is complete with hinges and aluminum angle frame. Ready for immediate and simple installation.

DAMAGE to machinery and fires caused by tramp iron can be simply and economically eliminated by the Eriez Permanent Non-Electric Spiked Apron Magnet. Whether you're processing wool, cotton, rayon or sisal, experience proves that this powerful magnet is a positive way to remove tie buckles, ring travelers, fine wires, nails, bottle caps, etc. from your fibers. Many mills have completely eliminated damage to card and garnet clothing . . . Still others have stopped picking room fires . . . Consequently, there are no shutdowns, no let up in production or expensive time losses. With Eriez permanent magnets, you get the application engineering that means the correct magnet for each tramp iron removal job . . . Powerful Eriez Permanent Non-Electric Magnets, designed solely for textile use, are the strongest commercially produced.

Check these advantages:

1. Superior Cleaning Ability.
2. No Wiring for Electric Current Needed . . . No Coils to Burn Out.
3. Cool Running . . . No Loss of Magnetism Through Heating Up.
4. Not Affected by Moisture or Wet Materials
5. No Operating Costs . . . First Cost is Last Cost.
6. Minimum Installation Cost.
7. Simple . . . Powerful . . . Permanently Magnetized.
8. Uninterrupted Operation . . . Top Efficiency Always.
9. Easily Installed in Original Equipment.

Pioneer of PERMANENT Magnetic Separation

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See our catalog P $\frac{1b}{2}$ Sweet's Process Industries File.

Write for bulletin 104-A

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count, an *R* ticket is attached to the face of the pick clock; and the pick reader records the picks in the three right-hand columns of the adding machine. The operators on that loom are paid the medium rate per pick.

The high warp counts, carrying the highest of the three pay rates, are identified by tickets with Cs written on them. The pick reader enters picks on these looms in the middle columns of the adding machine.

The last loom on each job is identified by a *T* written on the card with the *R*, *L*, or *C*. The *T* signifies that a total is to be struck on the adding machine. A *T* appears at the end of each weaver learner's, weaver's, and fixer's job. The first total on a stand of looms is given to the learner, the second to the weaver, and the third to the fixer.

When the picks on all the looms in a weave room have been recorded, the pick reader totals the picks for the room and goes to another room. When he has taken the picks in all of the weave rooms, he turns the adding-machine record over to the timekeeper.

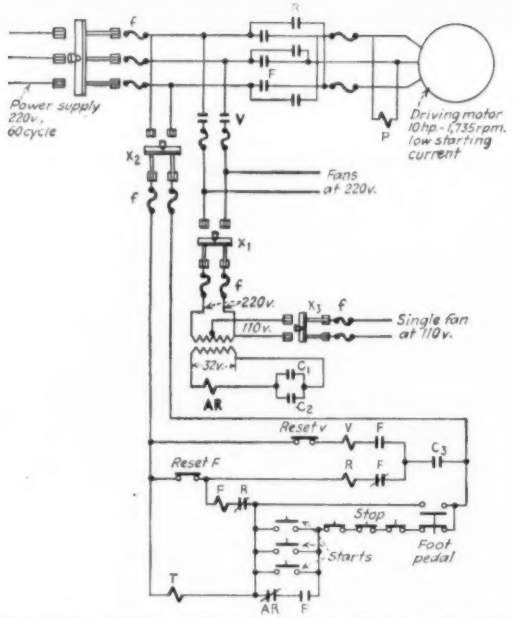
It is necessary for the pick reader to work a split shift so that he can read the picks for the two shifts. He reports at 7 a.m. and reads picks on the 2,100 looms for the second shift the day before. He finishes at about 9:30 a.m. He then works on any pick clocks that need repairing until about noon, goes out of the mill, and returns at 3 p.m. to read the picks for the first shift that morning. He finishes his work for the day at about 5:30 p.m.

Because of the inconvenience of working a split shift, the pick reader is given the privilege of repairing clocks at any time of the day he wishes. If he wants to be off between 9:30 a.m. and 3 p.m., he is allowed to do his clock-repair work after 5:30 p.m.

This method of reading picks has been used for years, and no trouble has developed. (*K-1078*) *J. M. Jackson, Columbus, Ga.*

Desk on Lift Truck

In our mill, the man in charge of receiving and storing bales, cases, etc. drives a Hyster lift truck, directs his helpers, and keeps necessary records. An attachment that has proved helpful to him is a round sheet of Masonite covering the inside of the steering wheel. This cover serves as a desk on which the records can be easily written up without the operator having to leave the seat of the lift truck. (*K-1075*) *Harold McLean, Huntingdon, Quebec*



F - Magnetic switch for normal operation
R - " " " stopping
V - " " " fans
P - Plugging switch coil
T - Counting-drum-brake coil
AR - Auxiliary relay
C_1 - Contact that closes when a thread breaks
C_2 - " " " every 500 yards
C_3 - Plugging switch contact
X_1 - Knife switch for transformer
X_2 - " " " control supply
X_3 - " " " single fan
f - Fuses

Note: F and R have mechanical interlock

***BALL WARPER** is stopped quickly at the end of a 500-yd. run by a plugging switch and circuit arranged as shown here. The plugging switch is indicated at P, and the magnetic switch used for normal operation is indicated at F.*

Ball-Warper Stops Aided by Plugging Switch

In our mill, we have a ball warper for producing yarn in a form suitable for dyeing prior to slashing. This warper had to be stopped every 500 yd. to pass through a lease. In order to obtain this yardage, a counter would automatically open the magnetic switch circuit every 500 yd. and stop the motor. In order to stop the motor at exactly 500 yd., the motor was equipped with a brake that was connected automatically as soon as the power was removed from the motor.

This system gave trouble year after year. Due to frequent brake operation, the adjustments of the brake would become loose and permit a few yards more than 500 to be run. At other times, the brake was adjusted wrong, with the result that it was adding load to the motor while the warper was running.

To avoid these troubles, we decided to eliminate the brake and to install in its place a plugging switch directly connected to the motor shaft. Plugging means, of course, to stop the motor by reversing the power connections and use the motor's tendency to run in the reverse direction to bring it to rest quickly. The object of the plugging switch is to remove the power from the reverse magnetic switch at the correct moment to keep the motor from restarting in the reverse direction.

The only equipment that had to be bought was the plugging switch itself. The rest of the equipment was made in our shop, mostly from used equipment.

The circuit we use is shown in the accompanying sketch. Normally the motor is running forward through magnetic switch *F*. As soon as a thread breaks or the counter marks 500 yd., either contact *C1* or *C2* closes, thus energizing auxiliary relay *AR* and opening the circuit of the magnetic switch *F* by AR's normally closed interlock.

The moment *F* opens, it opens the circuit of the fans and closes the circuit of the reverse magnetic switch *R*. As soon as the speed of the motor is

how SYNERGISTIC ACTION gives you higher detergency at lower costs...

Cleaning power of Santomerse No. 1

Cleaning power of tetrasodium pyrophosphate

Mathematical average cleaning power of Santomerse No. 1 and TSPP

Actual cleaning power of Santomerse No. 1 and TSPP delivered through Synergistic Action

A substantial bonus in detergency is yours at lower cost by employing the synergistic action of two Monsanto products — Santomerse No. 1 and tetrasodium pyrophosphate. *What is synergistic action?* Suppose, for example, you mix Santomerse No. 1, a product of high detergency, with TSPP, having lower cleaning power, you naturally expect effectiveness that strikes an average of the two. Actually, however, the result is detergency higher than the average ... higher than the cleaning power of either product. This co-operation of the two Monsanto products, bringing a bonus in effectiveness, is synergistic action.

Since TSPP is priced even lower than economical Santomerse No. 1, the use of the mixture lowers your costs while delivering higher detergency.

Look into the possibilities of synergistic action in reducing your costs while increasing the efficiency of your cleaning and scouring operations. For details, contact the nearest Monsanto Sales Office or write: MONSANTO CHEMICAL COMPANY, Desk D, Phosphate Division, 1780 South Second Street, St. Louis 4, Missouri.

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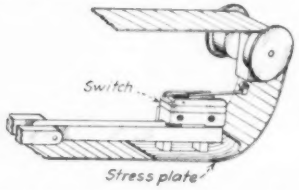
down to 70 rpm., the plugging-switch contact C3 opens and the motor is at rest. The same stopping operation is obtained when a Stop button is pressed.

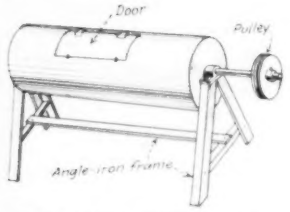
This system has proved satisfactory and is definitely better than the old brake. Maintenance is seldom required, and the motor is stopped more quickly than before. *(K-1069) Sergio Martinez, Jr., Havana, Cuba.*

Conveyor Safety Switch



***CONVEYOR TROUBLE** caused by an overload or by a jam-up of the drive can be prevented from damaging the conveyor by a knock-off switch mounted as shown here. The switch is placed on a pivot arm that rests on a stress plate that rides the conveyor belt. This assembly is of sufficient weight to replace an idler pulley that normally would be at the return end of the conveyor. The knock-off arm of the switch is located just under the end pulley of the conveyor. If the load on the conveyor gets too heavy, or if undue tension is placed on the belt, the stress plate and pivot arm will be raised. The knock-off arm of the switch will strike the bottom of the end pulley and open a circuit to stop the conveyor.* (K-1067) Micro Switch

Small Parts Cleaned By Tumbling Cylinder



***A DRY-CLEANING BARREL** for cleaning rings, drop wires, and other small parts can be made as shown here. An abrasive mixture, composed of sawdust, ground cork, and small rags, is tumbled with the parts to be cleaned.*

A dry-cleaning barrel for small parts such as rings and drop wires can be made as shown in the accompanying sketch.

A wooden or metal cylinder (an old section of a spinning-frame or twister cylinder, or even a barrel, will serve) can be used to make the cleaner. Place heads in the ends of the cylinder, and mount the cylinder on a rod or shaft so that when the shaft turns the cylinder will turn.

Make a stand for the cylinder by welding 1¼- or 2-in. angle iron to form legs at each end of the cylinder. The legs must be braced by cross-pieces so that they will be substantial. At the top of each pair of legs, place a plain bearing for the cylinder shaft to turn in. Secure a V pulley to the extended end of the cylinder shaft.

A door should be cut in the center of the cylinder and hinged to the cylinder. Small metal latches can be used to hold the door in place when it is closed.

To use the cleaner, fill it about one-quarter full of sawdust, ground cork, or small rags. A mixture of all of these is good. Place the small parts to be cleaned into the cylinder, and close the door and latch it securely. Throw the band (or belt, if a flat pulley is used) over any convenient shaft, and place it over the pulley. A very slow speed of the cylinder is all that is needed.

As the cylinder or barrel turns, the cleaning mixture and the parts to be cleaned are tumbled together. The abrasive action of the cleaning mixture against the parts cleans them. *(K-1073) J. B. Boyter, Fitzgerald, Ga.*

Light Bulb Dries Clothes

Foremen and mechanics usually have individual lockers where they can keep extra clothes. Often, during damp weather, street clothes and work clothes do not dry out while hanging in the locker.

A 150-watt light bulb installed in the locker and kept burning while damp clothes are hanging there will give off sufficient heat to dry the clothes thoroughly. *(K-1090)*

Rayon-Yarn Cut Marks Used by Worsted Weaver

We have been using worsted yarn between cut marks in all of our worsted fabrics. Our finishing department requires 9 in. of cloth after each cut mark, which makes a total of 18 in. of cloth (about two bobbins of filling) wasted at each cut mark.

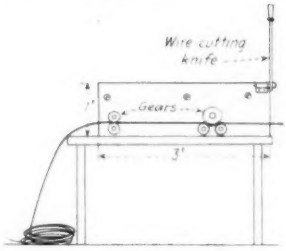
At the present price of worsted yarn, this practice was quite expensive; and we substituted 10/1 rayon yarn for weaving on each side of the cut mark. The rayon yarn we use can be bought for 50¢ a lb., which makes it considerably less expensive than worsted yarn.

To avoid mixing the rayon yarn with worsted yarn, we buy the rayon in a dark blue color. This color contrasts so strongly with all the colors we run that the rayon can be spotted instantly. *(K-1074) Tom Vine, Huntingdon, Quebec.*

In-Plant Smoking Areas

***IN-PLANT SMOKING AREAS** have been provided the workers at Bachmann Uxbridge Worsted Corp., Uxbridge, Mass., in open areas where there is no danger of fire. The smoking area is in plain view, and the time allotted each worker for smoking is left to the overseer of the department. In practice, the overseers tend toward leniency but when abuses of the privilege come up, swift and decisive action is taken. No strict rules are made, but it is impressed on the workers that continuation of the practice depends upon reasonable use of the areas.* (K-1100)

Wire Straightener Made of Old Gears



***A WIRE STRAIGHTENER** can be made with old gears as shown here. Pull the wire between the gears with a pair of pliers, and cut it with the hinged knife at the end of the board.*

A wire straightener that is useful in straightening small electric cable and other kinds of wire and also for making harness wires is shown in the accompanying sketch.

A piece of 1-in. board or flat iron 1 ft. wide and 3 ft. long is used for the base of the straightener. This base is stood on one edge and fastened to the workbench or tool box with three wood screws. Old gears, placed on studs, are mounted as shown in the sketch. The pair of gears at the end

For Vat Dye Printing...

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of the board must not mesh but should be separated by about the thickness of the wires to be straightened.

At the back end of the base, a wire cutter is hinged to the base so that a wire can be cut to the desired length by swinging the knife over and pressing it against the wire. The knife can be made of any hard steel; it should be beveled off to a sharp edge at the side that works against the end of the base.

To use the straightener, place the wire to be straightened on the floor at the end of the workbench and run one end of it between the pair of gears and between the three gears as shown. Pull it through with a pair of pliers until the desired length has been straightened; then cut the wire with the knife. *(K-1072) J. B. Boyter, Fitzgerald, Ga.*

Oiled Picker-Lap Pin Reduces Lap-Tail Waste

Lap-tail waste has been cut to almost nothing in our card room by the use of the oil trough shown in the accompanying photograph.

Before the troughs were installed on our pickers, each picker lap had a twisted and folded tail that made the last yard or two of the lap unusable. The folds were caused by the failure of the lap pin to pick up the lap sheet and cause it to start winding.

In order to keep the picker producing at its top rate, the doffing of the picker was done as follows:

When the picker knocked off, the tender released the loggerheads by stepping on the foot pedal. He pulled the lap pin, placing the card pin inside the lap, and slid the lap pin onto its resting place on the hooks at the front of the picker. Then he started the picker again, took the lap off the picker, and placed it on the scales. When he turned back to the picker to throw the lap pin back into running position, the lap sheet had already started coming through.

The tender threw the pin in place, stepped on the foot pedal, and ran the loggerheads down against the ends of the pin. Then he had to start the lap sheet winding around the pin. By this time, one or two feet of lap had run under the pin. If anything happened to keep the loggerheads from releasing and lowering properly, more lap sheet ran through.

Usually, the tender caught the sheet in the center and held it against the pin until it started winding. Folds ran from the center of the lap to the end until all of the end had been wound up. These folds also damaged the lap sheet coming through and winding over them.

***LAP-TAIL WASTE** at cotton cards was considerably reduced in one mill by the installation of an oil trough at the front of each picker. The trough deposits a film of spinning-spindle oil on the lap pin to cause the pin to pick up the picker-lap sheet and begin winding. Long, folded tails that had to be broken out of the card and thrown into waste were eliminated. The lever is used by the tender to flip the lap pin back into running position. It saves lifting the pin.*

When the lap ran out on the card, the folds had to be broken out to prevent uneven sliver weights and damage to the card. The result was one, two, or three yards of lap thrown into the waste box to be rerun.

Since we installed the oil troughs, we have only about a foot of lap to throw into waste. The oil lubricates the lap pin while it is at rest on the hooks. When it is thrown back into running position, it picks up the lap sheet at once all across the picker and begins winding.

The trough is made of angle iron bolted to the front of the picker. It is placed directly under the lap-pin position when the pin is on the front hooks. The inside-angle side of the trough is covered with clearer cloth or slasher-blanket cloth. It is folded over the edges of the angle iron and glued.

Since the glue will not hold it after it becomes soaked with oil, a ¼-in. rod is placed over the cloth in the bottom of the angle-iron channel. The ends of the rod are bent at right angles and stuck through holes in the angle iron. (If trouble is experienced with the rod coming out of place, the ends can be threaded and nuts run up on them.)

Spindle oil used in the spinning room is put on the cloth. When the picker tender places the lap pin on the hooks, he gives it a light spin so that the whole surface of the pin is lubricated.

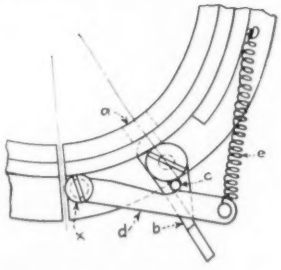
The lever shown in the photograph was installed along with the trough to relieve the picker tender of the necessity of lifting the lap pin when he puts it back into running position.

The lever is anchored on pivots at each side of the picker. A double-eye bolt through the plate at the side of the picker can be used for the holding bracket. A straight bolt through the double eyes and through a hole in the flattened end of the lever will form the pivot. The lever is bent so that it rests just under the ends of the lap pin when the pin is on the hooks.

When the picker tender places the doffed lap on the scales and is ready to return the lap pin to its running position, he catches the lever with one hand and flips the pin over the curved housing at the end of the grooved rolls. As the tender lifts up on the lever and the pin is raised, it rolls along the lever and the curved housing and drops into position.

The film of oil on the pin causes the lap sheet to stick to the pin at once. *(K-1076) Ralph L. Taylor, Columbus, Ga.*

Woolen-Sock Production Was Almost Doubled



***WOOLEN-SOCK PRODUCTION** was nearly doubled on Invincible knitting machines by arrangement for forcing the hand-transfer leveling lever to make its full swing. Spring e provides the power necessary to press lever d against stud c on hand lever b. On the upward swing, c is against the straight section of the upper edge of d. On the downward swing, c travels along the curved section of the upper edge of d.*

Some time ago, we had trouble with our coarse-gage Invincible knitting machines on heavy woolen socks. The average production of our topper-knitters was 16 doz. per 8-hr. shift. At times, two fixers could not keep 30 machines running.

The main trouble was in the hand-transfer leveling lever. If the vertical slide cam was not moved all the way up or down, 5 to 20 needle butts would be cut off when the machine

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179

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turned. Usually, when the needle butts were cut off, we had to take the cam cylinder apart to clear out the cut butts.

We corrected this fault and increased our average production to 27 doz. per 8-hr. shift by changing the hand-transfer leveling lever as shown in the accompanying sketch.

The sketch shows the hand lever *b*, which operates slide *a*, in approximately its central position. Trouble developed when lever *b* moved upward or downward from its central position but failed to move far enough for leveling and knitting. The solution lay in devising some means for forcing lever *b* to complete its upward or downward movement.

This means was provided by the use of coil spring *c* and lever *d*.

Lever *d* is made of ¼x¾-in. tool steel drilled, shaped, hardened, and polished. One function of *d* is to be pulled upward against stud *c* on lever *b* and force *b* to travel its full swing. Coil spring *e* provides the power needed to pull *d* against *c*.

Another function of *d* is to permit stud *c* to slide cam-like along the curved top of *d* when *b* is making its downward swing. The depth and extent of the curve in *d* forces *b* to complete its full swing.

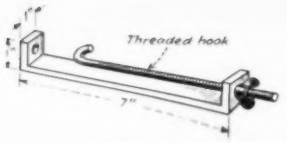
To make lever *d* work clear of lever *b*, it was necessary to raise *d* above the cam cylinder at point *x*, where it is pivoted to the cylinder. This task was done by removing the cam-cylinder screw at that point and substituting a longer one. A hexagonal nut of the same thickness as lever *b* was run down on the cam-cylinder screw to the face of the cylinder to serve as a spacer. *(K-1062)* Walter A. Simond, Franklin, N. H.

Wing-Nut Tightener
Used on Fallow Wires

Putting fallow wires on fallow-finger castings on a spinning mule is a clumsy job. The usual method of putting wire on a finger is to loosen the finger, knock it back with a hammer, put on the wire, and knock the finger back in place in order to tighten the wire. The wire then has to be adjusted for length by cutting off the end and filing down the sharp edges of the end.

During the manipulation, fallow-finger castings are frequently broken.

These breaks can be avoided and about 75% of the time required for putting on a wire by the old method can be saved if a tightener similar to the one shown in the sketch is used.



***FALLOW WIRES** on a spinning mule can be tightened more easily and without breaking the fallow fingers with the tightener shown here. The wire is attached to the fallow finger, inserted into the tightener, and placed around the hook in the tightener. The wing nut is run up on the threaded rod to tighten the wire.*

The tightener is made of a piece of band iron ¼ in. thick, 1 in. wide, and 9 in. long. An inch of the length of the iron is bent upward at each end, as shown in the sketch, at right angles with the remaining 7 in. of the piece.

In the center of one of the 1-in.-square ends, drill a ¼-in. hole, smooth it, and bevel off the outside edge. This end of the tightener will be used against the fallow finger.

In the center of the other 1-in.-square end, drill a ⅜-in. hole and smooth it. This hole will be used to receive a ⅜-in. rod.

Make the rod 7 in. long and form a hook at one end. Now, thread the rod from the other end over nearly all of its length. Insert the threaded end of the rod into the ⅜-in. hole from the inside of the band-iron angle, so that the hook end of the rod extends toward the other end of the band iron. Run a wing nut up on the threaded end of the rod.

The tightener is now ready for use.

Put the fallow wire on the fallow finger in the usual way. Cut the loose end of the fallow wire so that it is about 8 in. longer than the finger. Insert this end of the wire into the beveled ¼-in. hole in the end of the tightener. Push the tightener along the wire until the 1-in.-square end touches the fallow finger.

Bend the wire around the hook in the end of the ⅜-in. threaded rod, and hold it in place by cupping the left hand over the wire, hook, and base of the tightener. Tighten the fallow wire by running the wing nut up on the ⅜-in. rod.

When the wire is as tight as it needs to be, lift up the tightener, pulling the wire up with it. When the end of the tightener clears the end of the fallow finger, the pressure on the fallow wire goes off and the tightener can be freed by unhooking the wire and pulling the tightener from over the wire.

The fallow wire can now be wound around the finger in the usual manner.

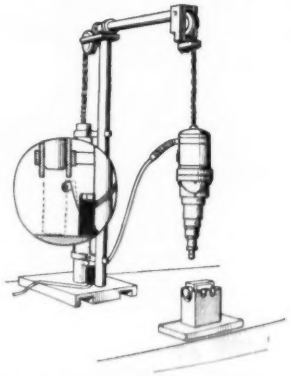
Of course, the tightener will have to be used a few times before it can really be appreciated. The user must learn to judge the tension on the wire by the feel of it under his left hand while it is cupped over the wire and by the pressure required to tighten the wing nut. It is quite easy to break a wire. It may be necessary to let off tension with the wing nut as the wire and tightener are raised above the finger.

Instead of cutting off the wire, it is a good practice to break it off by working it back and forth a few times, either by hand or with a pair of pliers. Such a break does not leave sharp points that must be filed off to prevent a spinner from getting a scratch from them. (K-1063) Joseph Nadeau, Keene, N. H.

Common Salt for Processing

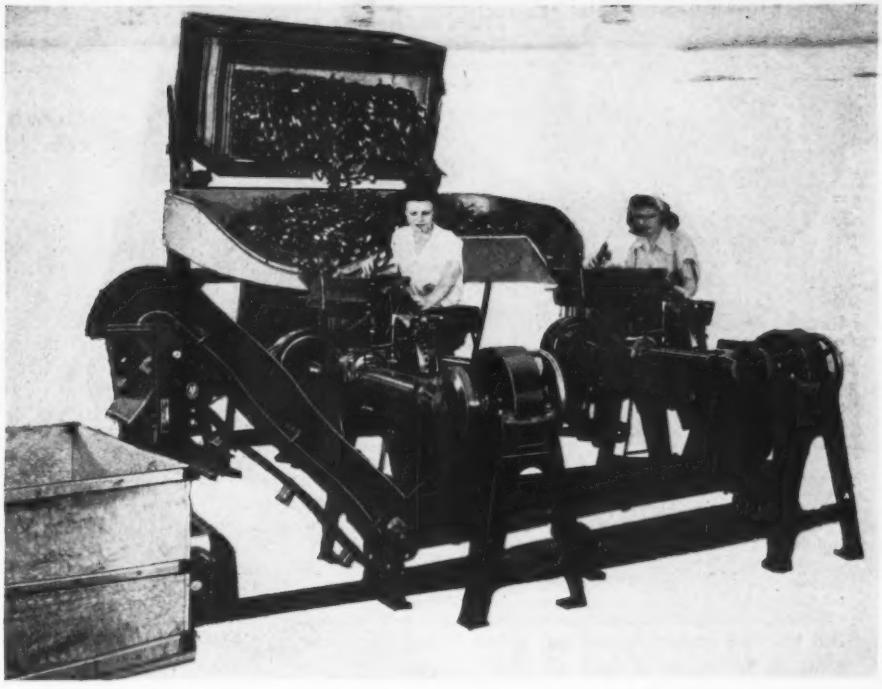
Common salt is interchangeable with glauber salt in textile dyeing, according to an evaluation of the two made by the American Assn. of Textile Chemists & Colorists. Tests are under way to determine how extensively this knowledge can be used in practical mill processing. *(K-1071)*

Switch Stops Screwdriver



***ELECTRIC SCREWDRIVER** is stopped from turning by a snap-action switch installed as shown here. When the screwdriver is raised off the work, the counterweight on the other end of the chain is lowered. When the weight strikes the switch lever, the lever throws open the circuit to stop the screwdriver. When the weight is raised again by the lowering of the screwdriver, the circuit closes again and the screwdriver starts turning.*

Many applications could be found in a mill shop for such switches. For example, a switch could be put on a drill press to stop the drill when the work has been cut through. Another application would be on a power saw to stop it when it cuts through the work. (K-1065) Micro Switch



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Round Table

FOR EXCHANGE OF IDEAS—*The Round Table is open to letters from any and all readers discussing subjects relating to mill management, production, engineering, technology, etc. Names of contributors will be held confidential if so requested, but contributions must be signed with real name and address as evidence of good faith and to permit payment for items published. Address contributions to: Editor Round Table,* TEXTILE WORLD, *330 West 42nd St., New York 18, N. Y.*

Reader Backs Our Stand for Standards

It is with a great deal of pleasure that I have read the December and January editorials in TEXTILE WORLD. We are in sympathy with your drive for effective industrial engineering and would like to see these editorials appear before every textile manufacturer.

We are set up to train young men and women for the type of technical positions that you mention and find that we still have a selling job to do in the industry. We trust that you will keep pounding away on the points that you have brought up and that eventually the sections of the textile industry that are lagging behind will follow in line with more modern methods of manufacture. *(R-461) Louis F. Haage, Senior Instructor, Textile Technology. The New York State Institute of Applied Arts and Sciences, Utica, N. Y.*

Worsted Ends Down Improved by 55%

I have recently completed some tests in our spinning department to determine whether a recommended relative humidity actually gave us the best results.

Our spinning room is a totally enclosed building with 10,000 sq. ft. of floor area and an 18-ft. ceiling. We have 10 Whitin Model-BW, Bradford-worsted, ring-spinning frames of 224 spindles each with a 15-hp. motor mounted on each frame. The frames are laid out lengthwise the room. Four deep, they occupy two and one-half bays comprising 6,250 sq. ft. The remaining 3,750 sq. ft. is used for roving supply which is stored in the area for 1 to 2 weeks before being spun.

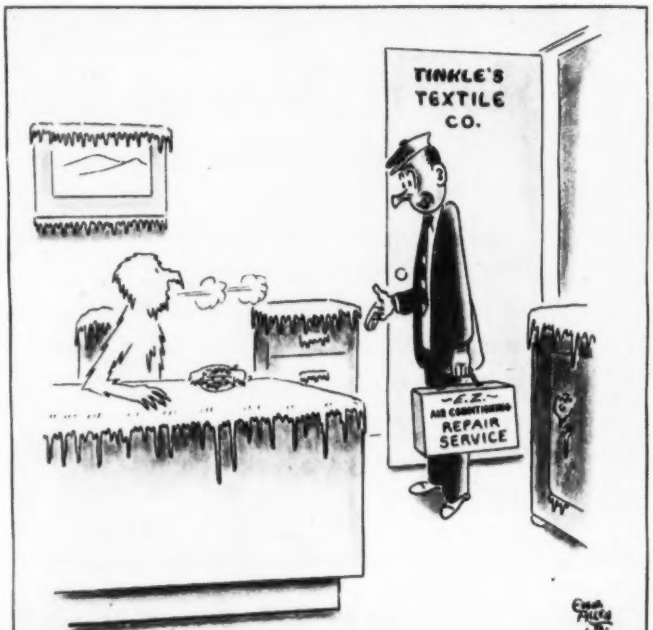
We have an American Moistening Co. humidification and evaporative-cooling system. The humidity system services the whole room, while the evaporative cooling system, with 8 intake and 8 outlet units, services the frame area only. The compressor equipment is in the roving-storage area and has a 25-hp. motor. This motor plus 10 frame motors make a total of 175-hp. in the room.

After running for some time at the generally accepted relative humidity of 50 to 55%, and noting the results, I tried settings all the way from 35 to 60%. Eventually, we arrived at the conclusion that our best results were obtained at a setting of 42 to 44% r.h. and a temperature of 71° F. At these settings, our end breakage was substantially reduced; and no increase in fly waste was noticed. For example: on 1/32s, 60s, oil-combed yarn, using a ⅛-in. vertical-flange ring of 3-in. dia., and spindle speeds of 6,500 rpm., we obtained end-break records of 50 to 60 ends-down per thousand spindle hours. We had previously obtained records as high as 110 at other settings. I would like to know from the experts in humidification what their recommendation of 50 to 55% r.h. is based upon. *(R-462)* Malcolm Paul, Huntingdon, Quebec.

Use Your Slide Rule On Mill Problems

Some time ago, an article appeared in TEXTILE WORLD on the use of the slide rule for practical problems. For quick results on recurring problems, the article suggested a constant which was computed from all the fixed factors in a formula with variable factors omitted. The fixed-factor constant was multiplied or divided by the

TEXTILE TICKLES . . . . . By Edgar Allen, Jr.



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Round Table

variable factors for the desired answer.

This method can be extended to simple examples of picker problems. All factors in the problem are fixed except the rpm. of the lap roll and the ounces per yard of the lap. The constant figured from the fixed factors equals 2.5. Multiplied by 10 (rpm. of lap roll) and 14 (ounces per yard), the constant becomes 350 lb. production per picker hour. This type of calculation is well suited to the slide rule.

A modification of the equivalent-ratios table found on the back of the standard Mannheim slide rule is used by many practical mill men. When a decimal or a large number of significant figures is involved, the table provides an easier and quicker method of placing the factors correctly.

It will be noted that the first equivalent ratio printed on the back of the slide rule is as follows:

Diam. circle : Circ'f'ce circle = 113 : 355

This ratio means simply that by setting 113 on scale C over 355 on bottom-scale D, all diameters of circles on C are converted to their respective circumferences on D. This method of setting is easier, and more precise than one whereby an estimate must be made for the correct position of the decimal part of π (3.1416).

One mill man has developed an additional list of equivalent ratios on the back of his rule. He has found them to be especially valuable from the standpoints of placing factors correctly and of calculating rapidly the necessary mill problems.

A few selected ratios are given below. It would be a simple matter to make up a more extensive list to fit any process or form of calculation.

Picker lb. per hr. (with 14-oz. lap) : 1 rpm. lap roll = 22 : 78

Card lb. per hr. (52 gr.) : 1 rpm. doffer = 69 : 80

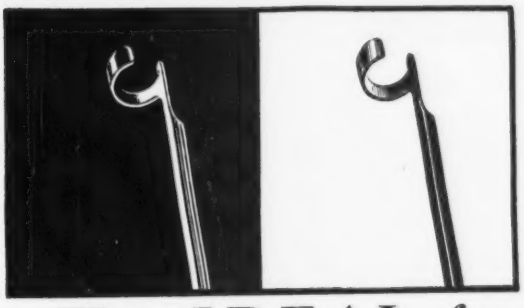
Draw lb. per hr. per del. (66 gr.) : 1 rpm. frt. roll = 8 : 42

Slubber lb. per fr. hr. (1.25 h.r.) : 1 rpm. frt. roll = 70 : 32

Slubber rpm. frt. roll (1.25 h.r.) : 1 tooth twist gear = 32 : 152

To work out the first ratio on the above list in which the actual speed of lap roll is found to be 10: set 22C on 78D resulting in a value of 35.4 under 1C on D, which multiplied by 10 rpm. gives the answer of 354 lb. per hr.

By using the ratios above, the mill man sets the rule to give the value of one unit. Under the desired num-



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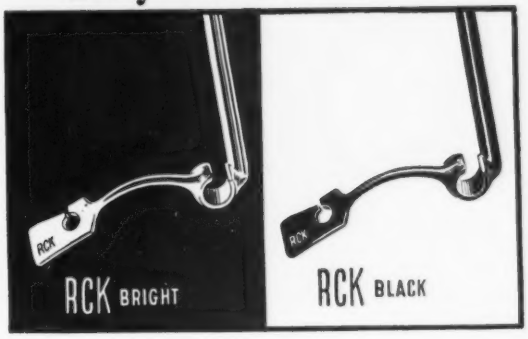

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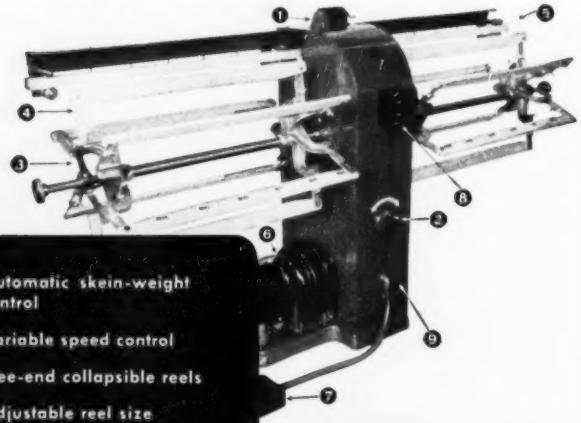

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Round Table

(Continued)

ber of units indicated on scale C will be found the value of that number on scale D.

The application of the ratios in the case of the long-draft slubber indicated above is as follows: the setting of 70-32 gives the value in pounds of 1 rpm. which, multiplied by 152 (actual front-roll speed), gives 69.5 lb. per frame hr. Also 69.5 multiplied by 40 equals the frame production for 40 hr.

It is better to have these ratios based upon actual timings of production rather than upon estimated or theoretical values. In this way, all normal stoppages and losses are allowed for; and there is no need for production allowances. *(R-463) Charlotte, N.C.*

1949 Will Be A Good Year

Thank you very much for your letter of Jan. 13 and for the textile-industry business indexes. Apparently 1949 will be a good year despite popular opinion to the contrary. Let us hope that in holding this opinion we do not suffer the sorry fate of Dr. Gallup. *(R-464) Arthur H. Razee, Manager, Chemical Service and Sales, Rumford Chemical Works, Rumford, R. I.*

Safety Can Cut Your Costs

Ask the average overseer how to reduce costs, and his answer likely will be, "Increase your production per cost unit." He is largely correct. Efficient methods are sure-fire cost reducers. Inefficiency and slovenly methods boost costs at a terrific rate. Yet, there is another factor that enters into the cost picture, although it is more difficult to understand than the more obvious reasons. This factor is accident frequency.

Many manufacturing plants purchase their insurance against accident occurrence on a cost-plus basis; that is, a set amount is paid to an insurance company; and if the cost of maintaining the liability is higher, the difference is charged to the concern which, in turn, must add this extra charge to its product. The department in which the accident occurs must expect to carry the additional cost; and thus the overall cost of maintaining the department is increased.

The cost of one or more accidents is readily apparent, but there are

(Continued on page 228)

SARAN

SARAN

BY NATIONAL

Beautiful! Care-free! Sales go to seat covers woven of SARAN!

Of course, motorists prefer the seat cover that provides the ultimate in good looks and long wear! They want the same fine qualities that distinguish saran in its widely diversified textile applications. For versatile saran monofilaments, as fine as .005", weave new measures of brilliant beauty, durability and usefulness into a host of today's functional fabrics . . . and constantly inspire new fabric trends, new sales opportunities. Write to us for details.

Suit and accessories from Saks Fifth Avenue, Detroit

REG. U.S. PAT. OFF.

Saran by National

ODENTON, MARYLAND

New York: Empire State Building • Los Angeles: Bankers Building

SARAN

SARAN BY NATIONAL *denotes monofilament, rattan and tape manufactured by The National Plastic Products Company from Dow's saran, and supplied to mills, weavers and other fabricators.*

TEXTILE BANKING COMPANY

Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

TEXTILE WORLD'S
Guide to Exhibitors
1949 Knitting Arts Exhibition

Names, booth numbers, and other data of exhibits at the 39th Knitting Arts Exhibition, Atlantic City Auditorium, April 25 to 29, are given on this and following pages.

ABERFOYLE MFG. CO. (325, 326, 339, 340, 350, 351)

123 S. Broad St., Philadelphia 9, Pa.

Features Durene mercerized cotton yarn; Weartwist, lisle knitting yarn; Neophil, nylon seaming and looping yarn; Durene and nylon combination reinforcement yarns; and covered rubber yarns.

Representatives at booth:
W. T. Galey, Jr., pres.
J. P. Holt, treas.
F. W. Hancock, v. pres.
E. J. Neal, v. pres.
Members of sales force

ADELPHIA TEXTILE CO. (243)

1815 W. Bristol St., Philadelphia, Pa.

Features double-resist-dyed rayon, cotton, acetate, silk, and nylon decorative yarns; indanthrene-dyed cotton yarns; dyed and mercerized sewing thread; seaming and looping thread in nylon and mercerized; twisted novelty and covered elastic yarns.

Representatives at booth:
Edward B. Steinmetz
Clarence Evans
James T. Hunter
Edward C. Steinmetz

ALLENTOWN BOBBIN WORKS, INC. (72)

417 N. 14th St., Allentown, Pa.

Features bobbins and spools for throwing and processing of fine yarns, such as nylon, rayon, silk, and combinations.

Representative at booth:
Henry W. Mack, v. pres.

ALUMINUM CO. OF AMERICA (185, 196, 223)

801 Gulf Bldg., Pittsburgh, Pa.

Features aluminum and magnesium products for textile industry, including castings, forgings, tubings, extrusions, and sheets; also samples of aluminum and magnesium fabricating and joining methods.

Representatives at booth:
H. H. Nuernberger, head, textile sect., dev. div.
C. Braglio, mgr., industrial machine group, dev. div.
A. E. Cummins, dev. eng.
J. B. West, dev. eng.
E. G. Kort, chemical eng., dev. lab.
Various sales rep.

AMALGAMATED CHEMICAL CORP. (382)

Rorer and Ontario Sts., Philadelphia 34, Pa. Reception space.

Representatives at booth:
Harold B. Dohner, pres.
Robert A. Bruce, v. pres., treas.
John M. Jester, sec.
Hillary Robinette, Jr., research dir.

AMERICAN ANILINE & EXTRACT CO., INC. (121)

Venango and F Sts., Philadelphia 34, Pa.

Features PM-90 size (for nylon); Orthocat (cation-active softener, all fibers); Size 4581 (new priming coat prior to application of PM-90); Orthonyl and Orthonyl W (nylon coning oils).

Representatives at booth:
Wm. J. Duddy, exec. v. pres.
R. D. McCarty, treas.
M. H. Silberman, technical dir.
Lynn Kippax, sales

AMERICAN BEMBERG CORP. (297, 298, 307, 308)

Elizabethton, Tenn.

Features Bemberg skeins and cones and the firm's certified tag for use on garments made of Bemberg.

Representatives at booth:
H. G. Spitzer
George Monk
James Furr
T. Tollner
J. C. Fortune
Richard Rhode

AMERICAN DYESTUFF REPORTER (128, 129)

1 Madison Ave., New York, N. Y. Textile publishers.

AMERICAN ENKA CORP. (397, 398, 421, 422)

206 Madison Ave., New York, N. Y. Rayon. Reception space.

Representatives at booth:
M. B. Carr
J. A. Van Laer
R. J. Mebane
R. R. Faison
E. W. Martin
Mr. Carico

AMERICAN KNITTING MACHINE CO. (353)

118 Boerum St., Brooklyn 6, N. Y.

Features its new double-head flat border machine, 12 cut; American speedy slitter for slitting double borders, links-and-links bodies and sleeves, sleeves from V-type flat machines, circular cloth, labels, etc.; jacks, sinkers, and needles for circular and flat knitting machines; cams and parts for domestic and foreign flat machines.

Representatives at booth:
George Zielinski, partner
Michael Zielinski, partner

AMERICAN LAVA CORP. (119)

Chattanooga, Tenn.

Features Alsimag thread guides for most types of knitting machinery and the new Alsimag tension rings and Alsimag traverse guides.

Representatives at booth:
G. E. Richter, v. pres. charge of sales
J. B. Shacklett, sales eng.
W. M. Brown, sales eng.

AMERICAN MACHINE & METALS, INC. (454, 455)

East Moline, Ill. See Tolhurst Centrifugals Div.

AMERICAN SAFETY TABLE CO., INC. (378, 379, 404, 405)

Reading, Pa.

Features power driving equipment for industrial sewing machines including new AMCO motor drive, collar machine, yoking table, and portable stand, the last two items developed within the last year.

Representatives at booth:
Julian C. Frankel, sales dir.
David Frankel, exec. v. pres.
Max T. Voigt, chief eng.
Benj. Greenawalt, sales rep.
James Harwick, sales rep.

AMERICAN TEXTILE MACHINE CORP. (119A, 119B, 119C, 119D)

Murfreesboro, Tenn.

Features five Holdstitch seamless hosiery machines.

Representatives at booth:
Thos B. Walker
James Jarvis
Harvey Shaw
Dick Taylor
Charles White

AMERICAN THREAD CO. (226, 227, 228, 229)

260 W. Broadway, New York 13, N. Y.

Features Hampton Durene.

Representatives at booth:
Harry Horrocks, gen. mgr. yarn div.
C. E. Bowne, industrial sales mgr.

AMERICAN VISCOSE CORP. (327, 328, 337, 338)

350 Fifth Ave., New York 1, N. Y.

Features model spinning machine making 1100-den., 490-fil., viscose yarn such as is used in tire cord. Photographs will show the various steps in production of viscose rayon filament, viscose rayon staple, acetate rayon, Vinyon-resin yarns and staple, and Sylvania cellophane.

Representatives at booth:
Murray H. Morse, viscose-rayon sales
Daniel A. Davis, acetate-rayon sales
Henry Hamilton, export sales
Samuel B. Lippincott, rayon-staple sales
Robert E. Smith, rayon-staple sales
Thomas H. Johnson, knitting dept.
Wirt Thompson, knitting dept.
Richard F. Eshleman, head textile research dept., knitting div.
Arthur N. Tingley, textile chem. div.
Frank F. Hilson, gen. sales
Nancy Hoffman, public relations
Robert D. Handley, adv. mgr. Sylvania Div.
J. Alfred Anglada, mgr. Sylvania's market-development dept.

AMERICAN VITOS CO., INC. (77)

220 E. 42nd St., New York, N. Y.

Features Vitos and Desmo Vitos hosiery-mending equipment.

Representative at booth:
A. de St. Maurice, pres.

AMERICAN WOOL & COTTON REPORTER (79, 80)

286 Congress St., Boston, Mass. Textile publishers.

AMERICAN YARN & PROCESSING CO (403)

Mt. Holly, N. C. Yarns. Reception space.

Representatives at booth:
W. H. Suttenfield, v. pres., sales dir.
W. S. Montgomery, sales rep.
M. L. Hixon, sales rep.
E. W. Wood, sales rep.
H. W. Davenport, sales rep.
E. J. Holbrook, sales rep.
T. J. Davis, sales rep.
C. E. Wood, sales rep.

JOSEPH AMON, INC. (70)

Rahway, N. J.

Features porcelain eyelets and thread guides.

Representatives at booth:
Anton Amon
Hugo Burdych
R. H. Therrell
Richard Cass, special rep. and consultant

ARROW NEEDLE CO. (388)

Manchester, N. H.

Features latch needles.

Representatives at booth:
George L. Heaton, Jr., pres., treas.
Donald A. McDonnell, v. pres.
Jack Forstadt, manager, Phila. office.

ATLANTIC RAYON CORP. (278, 279, 280)

86 Crary St., Providence 1, R. I. See also Synthetic Yarns, Inc.

See also Synthetic Yarns, Inc.

Features dyed rayon, acetate, and nylon yarns; especially acetate and nylon colored by the firm's patented process of package or wound-form dyeing.

Representatives at booth:
Ralph Lyons
Horace Greene
Roy Westland
Earle Taber

The 39th Knitting Arts Exhibition will open at 3 p.m., Monday, Apr. 25, in the Auditorium, Atlantic City, N. J. It will continue through Friday, Apr. 29, at 4:00 p.m. The National Association of Hosiery Manufacturers will hold its annual meeting at Hotel Claridge, Atlantic City, on the forenoon of April 25. The tenth annual Hosiery Industry Conference will open with luncheon at Hotel Claridge on April 25 and continue that afternoon and on the morning of April 26. The show will be open on the following schedule: Monday, 3 to 10 p.m.; Tuesday, noon to 6 p.m.; Wednesday, 10 a.m. to 6 p.m.; Thursday, 10 a.m. to 10 p.m.; Friday, 10 a.m. to 4 p.m.

BAUSCH & LOMB OPTICAL CO. (416)

835 St. Paul St., Rochester, N. Y.

Features the Ortho-Rater, an instrument for rapid and reliable measurement of employee visual characteristics; also the B & L Industrial Vision Service, a plan for fitting applicants and employees to jobs for which they are best suited.

Representatives at booth:
W. A. Carter, sales rep.
H. Cannan, sales rep.
M. Rutner, sales rep.

BOGER & CRAWFORD (291, 292, 313, 314)

J. & E. Venango Sts., Philadelphia, Pa.

Features 80s 2-ply spun nylon and products made from it.

Representatives at booth:
Mrs. Fredericka Boger
Ernest T. Boger
Robert C. Boger
Alfred H. J. Boger
Ira B. Wattis
John J. Nevins
Harry J. Riebe
Wm. C. Henderson
Hugh B. Chapman
James D. Whitaker
John Carrasco, export dept.

BREUER ELECTRIC MFG. CO. (449)

5100 N. Ravenswood Ave., Chicago 40, Ill.

Features dirt removal by vacuum rather than by blowing, displaying the Tornado line of machines including industrial vacuum cleaners, heavy-duty industrial vacuum cleaners, portable electric blowers and floor machines.

Representatives at booth:
A. A. Breuer, sec.
P. M. Williams, asst. sales mgr.
C. C. Lucas, Jr., district rep.

H. BRINTON CO. (399, 400, 401, 402, 417, 418, 419, 420)

3200 Kensington Ave., Philadelphia 24, Pa.

Features 15-in., 42-feed, 22-cut plain jersey RMF machine; 16-in., 16-feed, 18-cut, sinker-top SWY machine, with wheels and automatic tuck bars on all feeds and 4-color changers on 8 feeds; 24-in., 32-feed, 20-cut, automatic selective striper, sinker-top SSW machine with wheels and tuck bars on all feeds; 18-in., 16-feed, 14-cut manual plain and tuck, rib body MF-RB machine; 18-in., 18-feed, 18-cut automatic rib body MF-RB machine; 24-in., 32-feed, 18-cut, sinker-top STWY machine with 3-position wheels and automatic tuck bars on all feeds and 4-color changers on 16 feeds; 3-in. single-feed REL ribber with rubber inlay and 4-color yarn changer; these machines all equipped with individual motor drive, stop motions, safety controls, etc.

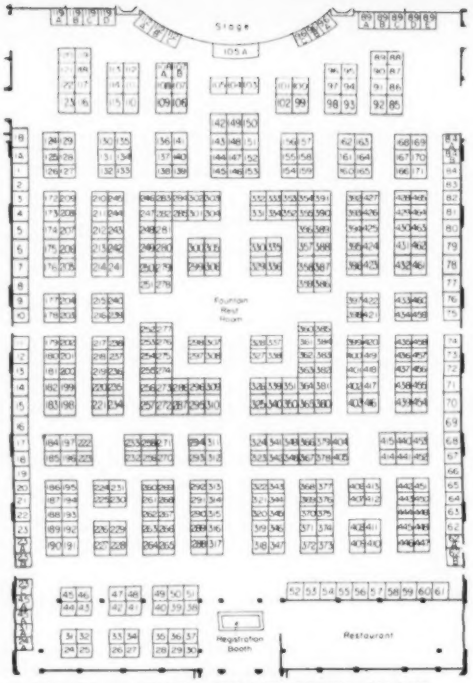
Representatives at booth:
H. W. Anderson, v. pres.
George McIlowell
Eric Cordin
Harry Strasberg
Seth Bittle
Nevin Kistler

BURLINGTON ENGINEERING CO., INC. (116, 117)

Graham, N. C.

Features 3-ft. stainless-steel dyebeck; 50-lb. stainless-steel rotary hosiery-dyeing machine; stainless-steel package-dyeing machine.

Representatives at booth:
J. Saunders Williamson, pres., treas.
J. A. Okey, v. pres.
W. J. Newcomb, sec.
D. L. Lomax, sales



TO LOCATE AN EXHIBIT FROM ITS BOOTH NUMBER

1 to 23, along southern wall.
24 to 51, just left of entrance.
52-61, right of entrance.
62-84, along northern wall.
85-171, at western end; lower numbers nearer stage.
172-245, southern side of auditorium, first and second tier cut from wall.
246-317, two tiers south of central aisle in middle of hall.
318-391, two tiers north of central aisle in middle of hall.
392-465, northern side of auditorium, first and second tier cut from wall.
A, B, C booths are opposite or adjacent to booths of corresponding numbers.
South is to left of entrance; north is to right of entrance; west is stage; east end is entrance.

H. W. BUTTERWORTH & SONS CO. (177, 178)

York and Cedar Sts., Philadelphia, Pa.

Features models of machines for bleaching, dyeing, and finishing rayon and cotton fabrics; shows no mill-size machines. Will introduce new low-production package-bleaching unit.

Representatives at booth:
Harry W. Butterworth, Jr., pres.
DeHaven Butterworth, Sr.*, v. pres. charge of sales
J. Ebert Butterworth*, v. pres.
Frederick N. Spoerl*, sales eng.
E. S. Pierce*, asst. sales mgr.
John H. S. Spencer, treas.
Thomas Davis, chief eng.
Paul Landwher*, purchasing agent
Joseph Sippel, rayon machry. div. mgr.
DeHaven Butterworth, Jr.
Joseph W. Tucker

* Regularly at booth, others on visiting basis

CANNON MILLS (408, 409)

70 Worth St., New York 13, N. Y.

Features carded and combed, natural and dyed, knitting and weaving yarns from Amazon Cotton Mills, Tuscarora Cotton Mill, Wiscassett Mills Co.

Representatives at booth:
H. E. Aken, v. pres.
C. V. Albright
J. C. Bartlett
Henry Crumbliss
M. B. Foil
E. H. Kelly
R. W. Lampman
J. J. Meyer
J. C. Williams

CELANESE CORP. OF AMERICA (293, 294, 311, 312)

180 Madison Ave., New York 16, N. Y.

Features robes, lingerie, sportswear, and bathing suits made from Celanese yarns.

Representatives at booth:
John Holmes, v. pres. charge of knitted-fabrics div.
William O'Donovan, gen. sales mgr., filament-yarn div.
Paul White, sales promotion mgr., knitted-fabrics div.
J. C. Cook, New York
Robert Burns, New York
Paul Duggan, New York
Charles Rogers, New York
M. P. Glinn, Phila.
T. C. Race, Phila.

CHINA GROVE COTTON MILLS CO. (241, 242)

China Grove, N. C. Yarns. Reception space.

Representatives at booth:
C. J. Beaver, sec., treas.
Jno. H. Rutledge, Jr., v. pres., asst. sec.
Karl M. Nelson, sales
B. F. Corvin, sales
F. P. Corvin, sales

CLOVERLEAF - FREELAND CORP. (96A)

Hazleton, Pa.

Features various types of spools including new developments and a new molded-barrel, take-up shaft.

Representatives at booth:
R. P. Bennett, sales mgr.
Travis Cox
James T. Gordon, Southern sales rep.
R. F. Molepence, New England sales rep.

COBBLE BROS. MACHINERY CO. (88)

213 W. Main St., Chattanooga, Tenn.

Features 4-color, yarn-change attachments for Brinton, Wildman, and Fidelity ribbers.

Representatives at booth:
Joe Cobble, partner
Lewis Card, gen. mgr.
W. J. Barlew, ribber sp'list.

COLLEGE PHARMACY PRODUCTS. (462)

251 Main St., Medford, Mass.

Features Clena-Form, newly developed cleaner and lubricant for boarding and preboarding forms, removing residues of dyes and resins and leaving a lubricating film which allows stockings to slide on and off more rapidly.

Representatives at booth:
Barney Zarakov, pres.
Miss Wilma Zarakov, asst.

COMER-AVONDALE MILLS, INC. (179, 180)

58 Worth St., New York 13, N. Y.

Features combed and carded, dyed and blended yarns from Avondale Mills and Cowikee Mills; also articles made from these yarns.

Representatives at booth:
A. F. Mullins, Jr., sec.
S. B. Terry, v. pres.
J. F. Sharp, sales
R. C. Weber, sales
S. E. Fulton, v. pres.
R. E. Fulton, sales

CHARLES COOPER CO., INC. (383)

Bennington, Vt. Reception space.

Representatives at booth:
John J. Hayes, pres.
Raymond Rogers, traveling rep.

COTTON YARNS CO. (286)

289 5th Ave., New York, N. Y.

CRAWFORD MFG. CO. (254, 255)

10 Dennis St., New Brunswick, N. J.

Features Crawford electric stop motions; Crawford hole detector; Crawford defect finder; Crawford needle savers.

Representatives at booth:
Alfred Crawford, pres.
Miss Kathryn Souter, office mgr.
George Onderdonk, sales
Michael Antonevich, installation
Frank Doerr, Jr., supt.

CROSS COTTON MILLS CO. (368, 369)

Marion, N. C.

Features double-carded and combed knitting yarn on cones, dyed and bleached, 16s to 40s, singles and 2-ply; new line of dark shades as well as bleached-base pastel shades (color cards available).

Representatives at booth:
Eugene Cross, Jr.
Oliver R. Cross
I. I. Davis

CUTTING ROOM APPLIANCES CORP. (99, 100, 101, 102)

15 W. 25th St., New York 10, N. Y.

Features electric knit-goods laying-up machine providing continuous cloth spreading, equipped with inspection lights and stop control for halting machine at any part of the cutting table; measuring and inspecting machine with new features for check-

ing piece goods more accurately, easily, and rapidly.
Representatives at booth:
David Grossberg, sales mgr.
Bernard Nathanson, sales
Bert Gottschalk, eng.
Harrison Bard, adv. mgr.
Sydney L. Hirsch, rep.
John E. Fox, rep.
John Pransky, rep.

DAVISON PUBLISHING CO. (11, 12)

Ridgewood, N. J. Textile publishers.

DECORATED METAL MFG. CO., INC. (463)

199 Sackett St., Brooklyn 31, N. Y. See G. B. Co.

Features shipping spools, pirns, and tubes including 10- and 12-in. nylon shipping tubes, metal-ended shipping spools for rayon and nylon, and special spools for plastic monofilaments.
Representatives at booth:
Rawson Atwood
C. C. L'Allemand

DIXIE MERCERIZING CO. (288, 289, 316, 317)

Chattanooga 1, Tenn. Reception space.

Representatives at booth:
G. R. West, Jr.
J. B. Frierson, Jr.
A. K. Johnson
B. P. Barnes
R. P. Cochran, Jr.
W. W. Logan
E. R. Kimball
D. O. Blevins
T. J. Tighe, export
J. B. Cameron
Alexander Cameron
P. D. Morrow
G. M. Porges
H. M. Peters
F. W. Frank
G. A. Dalglish
P. H. Dalglish

DUBIED MACHINERY CO. (428, 429, 430)

11-30 45th Rd., Long Island City 1, N. Y.

Features jacquard knitting machines, including type BARB full automatic flat jacquard machine with automatic stitch transfer for garments full-fashioned at the armhole, shoulder, and V-neck; also type WEVENIT circular jacquard machine with single-needle selection for fine gage fabric for women's dresses, suits, and coats.
Representatives at booth:
John G. Sandri, mgr.
Ernest Hafner

DUFFY SILK CO. (437, 438, 439)

1270 Broadway, Buffalo, N. Y. Reception space.

Representatives at booth:
Charles G. Duffy, Jr.
Paul Hemmerich
Paul H. Hemmerich
Fred Overkamp
Carl A. Lorenz, Jr.
C. Walter Seidel

DUPLAN CORP. (249, 250, 251)

512 7th Ave., New York 18, N. Y.

Features display of mill locations, photographs, and information on products.
Representatives at booth:
George Friedlander
F. J. Collins
N. P. Murphy
L. C. Pierce
R. H. Griffith
R. Mebane
W. S. Wheeler, Jr.
J. M. Huling
G. A. Fenton

E. I. DU PONT DE NEMOURS & CO. (38, 39, 40, 49, 50, 51)

Wilmington 98, Del.

Features products of the Fine Chemicals Div. of the Organic Chemicals Dept. and the Acetate Div., Nylon Div., and Rayon Div. of the Rayon Dept. Display includes Methacrol FNH resin dispersion, a finish for low-denier nylon hose to impart body; Methacrol NH resin dispersion, a finish for nylon hose to impart snag resistance; Methacrol lubricant C, a hosiery finishing agent; yarns, fabrics, and some garments featuring Orlon acrylic fiber, nylon, and viscose-process rayon.
Representatives at booth will include sales personnel from district offices of the various divisions from New York, Philadelphia, Reading, Wilmington, and other points on a day-to-day rotating basis.

TEXTILE WORLD will maintain headquarters in booths 85, 86, 91, 92 at the Knitting Arts Exhibition. Cordial invitation is extended to visitors to make this booth their business headquarters while in Atlantic City. TEXTILE WORLD will be represented during the show by Edwin D. Fowle, Publisher; C. W. Bendigo, Editor-in-Chief; Wm. Buxman, Manager; and by W. A. Newell, Prentice M. Thomas, C. Mallard Bowden, A. W. Fisher, R. L. Chisholm, H. C. Harvey, W. B. Dall, John White, R. C. Scott, and H. B. Le Feaux.

JOHN A. EBERLY (205, 206)

Reading, Pa. Mill specialties.

Representatives at booth:
Goodwill MacFadyen
Albert L. Eshelman
Victor L. Eshelman

EDMOS PRODUCTS CORP. (110, 111, 112, 113, 114, 115)

15 Christopher Ave., Brooklyn, N. Y.

Features circular rib body machines and precision castings, with emphasis on super-multi-feed high-production knitters.
Representatives at booth:
Milton Moskowitz, pres.
Lawrence Reed, eng.
Julius Citron, chief mechanic
Bernard Hirst, eng., Castings Div.
Al Hohmann, eng., Castings Div.

BERT A. EDWARDS CO. (120)

600 S. Lynn St., Bethlehem, Pa.

Features fabricated Lucite products for the hosiery mill, the hand polishing of which produces an extremely smooth surface. Display includes bobbin and pirn caps, examining forms and examining irons, looper boards, yarn-conditioning cases, signs, displays, etc.
Representatives at booth:
Bert A. Edwards
Esther Edwards
John McAvinia

ESSEX RIPLYN CO. (1, 2)

Hackettstown, N. J.

Features steam and electric drying forms for hosiery with attachments and steam circulator; also special form with bulge heel and toe to take dog-ears out of stockings.
Representatives at booth:
Paul Guggenheim, exec. v. pres.
R. S. Lynch, Jr., sec.

EWING-THOMAS CORP. (41, 42)

Rose and Walnut Sts., Chester, Pa.

Features line of Metro-Shade yarns.

FABRIC FINISHING CO. (126)

Lodi, N. J.

Features extensive range of finishes in knitted cotton and worsted fabrics, especially a stripe-set process.
Representative at booth:
Larry Wess, gen. mgr.

FAIRCHILD PUBLICATIONS (354, 355)

8 E. 13th St., New York, N. Y. Textile publishers.

W. F. FANCOURT CO. (371, 372)

516 S. Delaware Ave., Philadelphia 47, Pa.

Features new line of finishes including a permanent one-product, resin finish for use on nylon hosiery; Nydull, a delustrant especially for 15-den. nylon hosiery; dyeing and scouring compounds, particularly for one- or two-bath dyeing of nylon.
Representatives at booth:
W. F. Fancourt, Jr., pres.
W. F. Fancourt, 3rd, v. pres.
John L. Fancourt, sec.
Howard A. Virkler, Southern rep.
Thomas Lindley, Southern rep.
Claude G. Wolff, chemist

ERNEST A. FEUSTEL, INC. (68)

Lodi, N. J.

FIDELITY MACHINE CO., INC. (274, 275)

3908 Frankford Ave., Philadelphia 24, Pa.

Features Fidelity multi-design ribber with 25-step patterning mechanism using 120 vertical and five horizontal colors in production of true ribbed tops; Fidelity skein reeler, permitting great increase in operator efficiency and handling of nylon, rayon, silk, cotton, woolen, and worsted yarns as well as narrow fabrics; a new Fidelity 400-needle circular machine for women's hosiery of nylon, silk, rayon, or cotton.
Representatives at booth:
J. P. Vogt, pres.
H. I. Green, v. pres.
Joseph Bennett, eng.
George Petrie, eng.
S. B. Blaisdell, sales rep.
R. C. Aycock, sales rep.
R. M. Harbeck, sales rep.

FIRESTONE INDUSTRIAL PRODUCTS CO. (394, 395, 396, 423, 424, 425)

Akron 17, Ohio. See also Percy A. Legge.

Features Contro elastic yarn for use in girdle and swimsuit fabrics, hosiery tops, and surgical supplies; rubber used contains a preservative called Vitalin to preserve elasticity.
Representatives at booth:
P. P. Crisp
R. I. Mitchell
G. H. Ahlborn
T. J. Gracia
H. A. Stawniak
H. B. Winslow

J. A. FIRSCHING & SON, (376, 377)

421 Broad St., Utica, N. Y.

Representatives at booth:
J. A. Firsching, Sr., partner
Robert A. Firsching, partner

FLETCHER WORKS, (166, 167, 168)

Glenwood Ave. and 2nd St., Philadelphia 40, Pa.

Features new Fletcher King-Spool twister using single-head bobbins in take-up packages, including a bobbin-lifter knock-off motion; 40-in. Fletcher Whirlwind extractor with stainless-steel basket, automatic hydraulic brake, and finger-tip timer control.
Representatives at booth:
R. J. Bartholomew, pres.
Fletcher Schaum, v. pres.
W. H. Rometsch, sec.-treas.
Charles W. Moore, sales mgr.
Warren Egee, chief eng.
T. B. Baldridge, Jr., sales eng.
T. M. Jackson, Jr., sales eng.
F. W. Warrington, Southern rep.

FLORENCE THREAD CO., INC. (1A)

New Jersey Ave., Riverside, N. J.

Features hosiery and knitted outerwear produced from dyed and bleached yarns processed in package form. Stresses end-product application of yarns of various fibers processed in varying shades and fastnesses as well as new Ustex industrial sewing thread, based on a patented process of United States Rubber Co., which combines high tensile strength with low elongation on carded and combed cotton.
Representatives at booth:
Fred M. Grauer, v. pres.
Don H. Curtis, sales mgr., sewing thread div.
William A. Eipper, Jr., sales
Ernest W. Brenner, sales rep.

FOSTER MACHINE CO. (263, 264, 265, 266, 267)

Westfield, Mass.

Features Model 75 machine for winding rayon and nylon on cones and tubes; Model 76 nylon-sizing machine; Model 102 for winding cotton, spun rayon, and worsted yarns on cones and tubes. New things include a constant-speed precise-wind spindle designed for use with continuous-process rayon-spinning machines; equipment on the Model 102 for winding nylon monofilament on the new Foster Knit-Tube; a Model 102 holder for 1⅝ in. dye tubes.
Representatives at booth:
W. C. Chaplin, pres., treas.
A. B. Root, Jr., v. pres., gen. mgr.
E. C. Connor, sales mgr.
H. W. Ball, chief eng.
F. F. Stanze, eng.
E. R. Davis, eng.
C. B. Terry, sales
H. E. Swift, sales
E. P. Dodge, sales
E. H. Ely, sales

FRANKLIN PROCESS COS. (435, 436)

Providence, Philadelphia, Greenville, and Chattanooga.

Features dyed yarns for various knitting purposes with sample fabrics on display.
Representatives at booth:
Franklin Process, Providence—
W. A. Traver, pres.
C. W. Dawson
W. Gardner
Franklin Process, Philadelphia—
W. E. Wolfe
C. E. McElwee
R. Pollock, Jr.
Southern Franklin Process, Greenville—
B. S. Phetteplace
James Garner
Central Franklin Process, Chattanooga—
C. R. Ewing
E. Windle

G. B. CO. (463)

196 Degraw St., Brooklyn 2, N. Y. See Decorated Metal Mfg. Co., Inc.

Features plastic spools including a new development in an all-plastic throwing spool, primarily for use under the high pressures exerted by nylon.
Representatives at booth:
Rawson Atwood
C. C. L'Allemand

GENERAL HOSIERY MOTOR MEND CORP. (19)
40 E. 34th St., New York, N. Y.

Features Vanitas electric hosiery repair machines for repair of circular or full-fashioned nylons in the gray or finished state.

Representative at booth:
Chas. E. Mandelick, gen. mgr.

GINSBERG MACHINE CO. (433, 434, 459, 460)
224 5th Ave., New York, N. Y.
See Textile Trimming & Boarding Machine Co.

GLOBE DYE WORKS CO. (75, 76)
4500 Worth St., Philadelphia 24, Pa. Reception space.

Representatives at booth:
Horace T. Greenwood, pres.
Paul Greenwood, treas.
Thomas S. Greenwood, sales rep.
George T. Moore, sales rep.
William A. Hilbert, sales rep.
William Goodis, sales rep.

GRAND RAPIDS TEXTILE MACHINERY CO. (175, 176)
1405 S. Division St., Grand Rapids, Mich.

Features large illustrations of various machines for knitting, dyeing, drying, finishing, cutting, and pressing tubular knit fabrics and garments. Stresses preboarding of nylon piece goods, dyeing and finishing tricot fabric in tubular form, new bleaching tank and loader for cotton goods, new unit dryer for reducing shrinkage in knitted fabrics.

Representatives at booth:
W. H. Shields
W. F. Moon

GROVE NYLON CO. (9, 10)
Scranton 10, Pa. Reception space.

Representatives at booth:
W. L. Schautz
A. G. Schautz
William T. Cheatham, sales
William C. Napier, Jr., sales
Robert W. Yeabsley, sales
Robert F. Yeabsley, sales
Harry C. James, sales
Dr. R. F. Stuewer, chemist
John Kalinowski, technician

H. C. HARDING, INC. (16)
2nd and Tilgham Sts., Philadelphia 22, Pa.

Features Stay-Coat stainless needle oil, Humdinger needle polisher and preserver, XL trough solution for nylon yarn, 15-den. nylon yarn lubricant, Quick needle polish and cleaner, Check No. 9 solvent for removing size and other accumulations from hosiery machines. New is the firm's Triune (3-in-1) nylon-yarn softener and lubricant, and Sheer Joy lotion for keeping hands of operatives on nylons soft and smooth.

Representatives at booth:
H. C. Harding, pres.
Geo. J. Riehl, rep.

HARRIET & HENDERSON COTTON MILLS (84A, 84B)
Henderson, N. C.

Representatives at booth:
J. A. Cooper, pres.
M. Y. Cooper, sec.
D. Swain, Chicago
P. H. Dalglish, Providence
Alex Dalglish, Utica
Messrs. Brown and Cheatam, Greensboro
D. Blevins, Chattanooga
A. G. Sewell, Phila. and New York.

OSCAR HEINEMAN CORP. (412, 413)
Chicago, Ill.

Representatives at booth:
Donald G. Brewster, pres., gen. mgr.
J. C. Lavey, sales and prod. mgr.
R. E. Nelson, super. quality control
Charles Brereton, eastern rep.
Ben Wilson, Charlotte rep.
David Gott, Chattanooga rep.

HERR MFG. CO., INC. (96BB)
318 Franklin St., Buffalo 2, N. Y.

Features latest-design flyers of nylon in colors and a special lightweight flyer for twisting nylon and other light yarns; also conical spinning rings and travelers.

Representatives at booth:
Hyatt B. Atwood, pres.
Charles M. Kitzmiller, sales eng.

HESS, GOLDSMITH & CO., INC. (170, 171)
Atwater Div., 629 W. Main St., Plymouth, Pa.

Representatives at booth:
E. J. Schellenberg, gen. mgr.
E. J. Schellenberg, Jr., asst. mgr.
P. E. Walder, Jr., plant mgr.
R. P. Schellenberg, sales rep.

ALFRED HOFFMAN, INC., and ALFRED HOFFMAN NEEDLE WORKS, INC. (360, 361, 384, 385)
635 59th St., West New York, N. J.

Features machinery and attachments for full-fashioned hosiery, tricot, and gloves; but space will be used for reception only.

Representatives at booth:
Carlos A. Hepp, pres.
Peter Schoenster, sec.
George Bernegger
Hanns L. Wirth

HOFFNER RAYON CO. (246, 247, 282, 283)
Belgrade and Ontario Sts., Philadelphia 34, Pa.

Features knitted outerwear, sportswear, and hosiery made of viscose and acetate yarns; special resists for hosiery.

Representatives at booth:
Joseph C. Hoffner
John G. Hoffner
Frank M. Shannonhouse, Jr.
David F. Swain
Carl L. Miller, Jr.
William J. Henne

HOSIERY INDUSTRY WEEKLY (128, 129)
1 Madison Ave., New York, N. Y. Textile publishers.

HOSIERY & UNDERWEAR REVIEW (24A, 31A, 44A, 45A)
1 W. 34th St., New York, N. Y. Textile publishers.

E. F. HOUGHTON & CO. (89, 90)
Philadelphia, Pa.

Features products for knitting and dyeing, including synthetic detergents, wetting agents, needle oils, rust preventives, machine lubricants, Raylubric sizes and softening oils for rayon, Lanolubric and Sulfol brands of wool oils, textile leathers, and machine belts. Newest items include Cerfak, a flake-type detergent; Resonet, resin finishing material; Surfax 1288, a wetting agent.

Representatives at booth:
C. B. Kinney, mgr. textile sales
H. E. Sanson, Eastern gen. sales mgr.
D. C. Miner, adv. mgr.
H. E. Peterson, Eastern sales div.
O. H. McClay, Eastern sales div.
J. R. Clendenning, Eastern sales div.
H. H. Kirkpatrick, Eastern sales div.

HOWARD BROS. MFG. CO. (89A)
Worcester, Mass.

Features brush and napper clothing; also hand cards.

Representatives at booth:
Harold S. Bolger, Phila.
Ralph C. Shorey, N. Eng.

PHILIP V. HUGUES & SON (43, 44)
4632 Baltimore Ave., Philadelphia 43, Pa. See also Invincible Vacuum Cleaner Co. and Kent Co.

Features Kent floor-scrubbing and polishing machines and vacuum cleaners; Invincible heavy-duty vacuum cleaners; Kent combined electric mopper and vacuum cleaner.

Representatives at booth:
Philip V. Hugues, owner
C. E. Clifford, sales mgr., Kent Co., Rome, N. Y.
L. M. Thomas, sales mgr., Invincible Vacuum Cleaner Co.
Philip T. Hugues, mgr.
Joseph W. Hugues, service mgr.
Samuel C. Ruch, Allentown, sales eng.
Paul R. Young, Lancaster, sales eng.
E. F. Wittchiebie, New York, sales eng.
George W. Blanchard, Washington, D. C., sales eng.
J. Jones and G. Hill, Rome, N. Y., sales engr.

INDIANAPOLIS CHEMICAL CO., INC. (200)
502 N. Davidson St., Indianapolis, Ind.

Features nylon machine cleaner and nylon trough solution, stressing No. 9 Monofil knitting oil.

Representatives at booth:
H. T. Smolenski, chief chemist
M. E. Edington, mgr.
J. L. Thibodeau, sales rep.
M. Frahm, sales rep.

INDUSTRIAL DRYER CORP. (73, 74)
432 Fairfield Ave., Stamford, Conn.

Features H-W yarn conditioner, arranged for steam operation, complete with Bristol control hygrometer, hydramotor valves, and time clock so that its operation will be entirely automatic.

Representatives at booth:
F. W. Caesar
J. R. Tutt
P. H. Friend
W. A. Kennedy, and
Tom Jones, Southern rep. of W. A. Kennedy Co., Charlotte, N. C.
J. C. Westaway, and
K. G. Little, Canadian rep. W. J. Westaway Co., Ltd., Montreal, Quebec;
E. W. Schmiedel, and
C. V. Grantham, W. J. Westaway Co. Ltd., Hamilton, Ontario.

INTERNATIONAL NICKEL CO., INC. (410, 411)
67 Wall St., New York 5, N. Y.

Features mill and fabricated forms of Monel and Inconel alloys for textile applications, especially in hosiery-dyeing machines, skein-dyeing machines, conditioning cabinets, size-cooking kettles, etc.; also Ni-Rod, a welding electrode for machinable welds in cast iron.

Representatives at booth:
C. J. Bianowicz
A. C. Zino

INVINCIBLE VACUUM CLEANER CO. (43, 44)
Dover, Ohio. See Philip V. Hugues & Son.

Representative at booth:
L. M. Thomas, sales mgr.

LOYAL T. IVES CO., INC. (244, 245)
New Brunswick, N. J.

Features spring-beard needles, sinkers, jacks, and other special parts for knitting machines.

Representatives at booth:
Theodore Whitlock, pres.
Theodore Whitlock, Jr., sec.
Charles S. Lydecker, sales mgr.
Raymond Bergen

JACQUARD KNITTING MACHINE CO. (154, 155, 156, 157, 158, 159)
G and Lycoming Sts., Philadelphia 24, Pa.

Features circular links-and-links and transfer (rib) machines for manufacture of sweaters, including models LH, TJ, LA, and TA.

Representatives at booth:
H. Albertman
J. Titti

JOHNSON ENGINEERING & MFG. CO. (71)
173 Gilligan St., Wilkes-Barre, Pa.

Features bobbin boards, grill boards, cone boards, stainless-steel knitters' cabinets, and cone trucks. The cabinets have lately been put on market.

Representatives at booth:
George McGee, v. pres. charge of sales;
H. B. Ahlberg, v. pres., gen. mgr.

JOHNSTON MILLS CO. (268, 269)
Charlotte, N. C.

Features combed, carded, Durene, mercerized, and dyed cotton yarns from the Johnston group of mills.

Representatives at booth:
R. H. Johnston, pres.
D. R. Jonas, v. pres., treas.
W. J. Yates, Charlotte
E. E. Jones, Charlotte
F. N. Belk, Chattanooga
R. M. Bechtel, Reading
W. B. Phelps, Jr., New York
J. W. Ferguson, mgr. Phila.

JORDAN MILLS, INC. (375)
Columbus, Ga.

Features cotton yarns, colored and natural.

Representative at booth:
R. Curtis Jordan, Jr., v. pres.

KAHN & FELDMAN, INC. (364, 365, 380, 381)
200 Madison Ave., New York 16, N. Y. Reception space.

Representatives at booth:
Gerald N. Frank
L. J. Weil
H. Kurtz

C. P. KALER CO. (89E)
Lansdale, Pa.

Features Nopuls wraps, dye nets, and liners for cartons; also various type bags and bag holders.

Representatives at booth:
Clifford Kaler
Paul Kaler
Henry Landis

KALI MFG. CO. (69)
427 Moyer St., Philadelphia, Pa.

Features trough solutions for knitting of nylon, needle cleaners, scouring oils and sizes for nylon and rayon, treatments for viscose yarns for crepe, penetrators, leveling agents, buffers, water repellants, cation softeners, etc. Especially stresses Kalpinols, Kali Needle Kleaner, Hydroxy hand cream, Nylowash for scouring nylon and leveling dye bath, nylon oils, rayon oils, sizes, Watershield water repellant, cation softeners, Chlorapon buffer against chlorine in shrinkproofing of wool.

Representatives at booth:
S. G. Davenport, pres.
William B. Griffin, Southern rep.
John Gilroy
Ray Schadewald
Fred Muller
Jas. A. Branegan, Jr.
Eugene W. Wall

SAMUEL KASSAW CO. (67)
121 N. Broad St., Philadelphia, Pa.

KAUMAGRAPH CO. (224, 225, 230, 231)
Wilmington, Del.

Features Kaumagraph dry transfers for reproducing trademarks or decorations on anklets and T shirts; also examples of the latest trend in lithography for packaging; also Prestomarks, thermo-adhesive fabric label, together with Prestomark labeling machine.

Representatives at booth:
T. H. Miller, pres.
S. W. Porges, v. pres., sales mgr.
H. A. Keech, Middle-Atlantic rep.
W. P. Ralford, Southern dist.
J. L. Reeves, New England rep.
W. B. Gardner, Chicago
B. P. Lindley, New York

KENT CO. (43, 44)
Rome, N. Y. See Philip V. Hugues.

KIDDE MFG. CO. (442, 443, 450, 451)
35 Farrand St., Bloomfield, N. J.

Features new Model C Kidde knitter, incorporating many improvements; new sinker bar and chopper bar attachments are available, if desired. Also on display will be the new Kidde high-speed sectional warper.

Representatives at booth:
W. J. Behr, Jr., v. pres.
Kurt Kaak
John Fleming

WALTER KIDDE & CO., INC. (64, 64)
Belleville, N. J.

Features Kidde tension control shown on a single-spindle Universal 50 winder and Kidde tension compensator mounted on a single-spindle Whitin-Schweiter quiller.

Representatives at booth:
C. L. Griffin, asst. v. pres.
Jay S. Gosnell
David Kroll
Walter Elder

A. KIMBALL CO. (184)
307 W. Broadway, New York, N. Y.

Featuring Kimco labeling system designed to mark all types of tags and pin tickets, including wool labeling and piece goods information; Midget labeling system to mark all kinds of pin tickets, tags, and labels.

Representatives at booth:
John P. McGuire, asst. sales mgr.
T. R. Spencer, sales
H. Tracy Odom, sales
J. E. Woods, sales

JOSEPH KLUMPP CO. (444)
225 S. 15th St., Philadelphia 2, Pa. Reception space.

Representatives at booth:
Joseph J. Klumpp
Charles B. Rapp
George L. VonderLindt
T. Vance Lindsay
Fred L. Bowden
Wallace Gill
Lloyd C. Kinsey, New York
Edward J. Neenan, Jr., New England

THE KNITTER (290)
Charlotte, N. C. Textile publishers.

LACONIA NEEDLE CO. (198, 199)
Laconia, N. H.

Representatives at booth:
M. F. Pray, pres.
H. D. Sanborn, v. pres.
Bruce Lauderbach, Southern rep.
Guy L. Dawson, Southern rep.

LACY, ATHERTON & DAVIS (456)
Hotel Sterling Bldg., Wilkes-Barre, Pa.

Features pictures and information on textile mills designed by firm and built within last three years or now under construction.

Representatives at booth:
L. V. Lacy, partner
John W. Davis, partner
James O. Lacy, registered architect

W. T. LANE & BROS., INC. (248)
Poughkeepsie, N. Y.

Features mill trucks and canvas baskets.

LATTA, CURRIER CO., INC. (112B)
350 Fifth Ave., New York 1, N. Y.

Features fabrics and garments made from yarns spun by Cheraw Cotton Mills, Cheraw, S. C.; Carter Mills, Lincolnton, N. C.; Parkdale Mills (N. Y. area only), Gastonia, N. C.; Nuway Spinning Co., Cherryville, N. C.

Representatives at booth:
Albert W. Latta, Jr., pres.
Arthur M. Currier
William F. Durkin
Joseph M. McGinnes

LAUREL SOAP MFG. CO., INC. (207)
Tioga and Thompson Sts., Philadelphia 34, Pa. Reception space.

Representatives at booth:
Clarence E. Bertolet, pres.
Wm. H. Bertolet, Jr., treas.
A. Henry Gaede, Charlotte E. W. Seasongood, Phila.
T. C. Holst, Phila.

LEATEX CHEMICAL CO. (112A)
2722 N. Hancock St., Philadelphia, Pa.

LEE DYE WORKS, INC. (197, 222)
A and Clearfield Sts., Philadelphia 34, Pa.

Features Lee-Tex process and other new and improved processing techniques.

Representative at booth:
Lou Finkel, pres.

PERCY A. LEGGE (394, 395, 396, 423, 424, 425)
212 Summer St., Boston, Mass. See also Firestone Industrial Products Co.

Features Firestone's Contro elastic yarn, and also Bradford- and French-spun worsted yarns and specialty blends of angora, camel hair, cashmere, mohair, etc. from the following mills: Allendale Co., Allendale, R. I.; Argonne Worsted Co., Woonsocket, R. I.; Sidney Blumenthal & Co., Inc., Valley Falls, R. I.; Rochambeau Worsted Co., Providence, R. I.; Vee Gee Spinning Co., Lowell, Mass.; Warley Worsted Mills, Lowell, Mass.

Representatives at booth:
Edward Legge, Boston
Arthur E. Snyder, Boston
Thomas W. Adams, Boston
Clarence H. Vanderbeck, Phila.
Henry C. Legge, Phila.
Charles W. Neeld, Phila.
Richard S. Rosenfeld, Chicago
John W. Simpson, Greensboro
Oliver McCurdy, New York
Webster Smith, New York
Richard Condon, New York
A. Rex James, Providence
Albert W. Metcalfe, Providence

LEIGHTON MACHINE CO. (389)
Manchester, N. H.

Features garments made on company machines.

Representatives at booth:
Alfred B. Gould, pres.
Frank C. Golden, sales mgr.
Leon Rice, Jr., eng.

LEON-FERENBACH, INC. (124, 125)
40 W. 40th St., New York, N. Y. Reception space.

Representatives at booth:
C. W. Wolcott, Greensboro
R. W. Boyd, Chattanooga
W. W. Patten, New York
Carl Ferenbach, New York

LIBERTY THROWING CO. (23C)
1450 Broadway New York, N. Y.

Features "Premium" sizing with samples of "Premium" sized hosiery.

Representatives at booth:
Chas. M. Epstein, pres.
Chas. M. Epstein, Jr., v. pres.
John D. Sicher, sec.
Geo. M. Poillon, sales mgr.
Tom Moore, Jr., Southern sales

KARL LIEBERKNECHT, INC. (252, 253, 276, 277)
Reading, Pa.

Features new 60-gage, 32-section, full-fashioned hosiery machine. Booth used for reception space, but interested individuals will be taken to see machines installed in New Jersey or Philadelphia mills.

Representatives at booth:
A. Friedmann, pres.
C. A. Friedmann
George Groh
H. Thierfelder
John Renger
Leslie Engle

MACANAL TEXTILE CORP. (464, 465)
419 4th Ave., New York 16, N. Y.

Features combed and double-carded natural cotton yarns.

Representatives at booth:
Max Schiffman, pres.
Alex Madans, treas.
Leonard Madans, sales rep.

MAC KNIGHT & ETHERINGTON BROS. (370)
1518 Walnut St., Philadelphia 2, Pa. Reception space.

Representatives at booth:
Wm. A. P. MacKnight
Frederick Etherington
Burton H. Etherington, Jr.
Henry W. Swift, v. pres., Swift Spinning Mills, Inc., Columbus, Ga.
A. C. Lineberger, treas., Rowan Cotton Mills Co., Salisbury, N. C.

MARKEM MACHINE CO. (329, 330, 335, 336)
50 Emerald St., Keene, N. H.

Features Models BP, 105-10, and KD for box or label printing; Model 126 hanger-label-printing equipment; Model 10A for fabric stamping; Model 12A for printing pressure-sensitive tape; Model T for printing piece-work tags; bundle tags and the like. Models 10A and 12A are new. Others have been redesigned as to drives, improved quietness, feed mechanisms, etc.

Representatives at booth:
David Putnam
Harold Milton
C. H. Cheeseman
O. H. Meyers
Gilmore Fretz
Harold B. Lampman

Too Late to Classify

David Maimin & Co., 633 Arch St., Philadelphia—Booth 169

D. Paradis Co., Union City, N. J.—Booth 45

Philadelphia Penn Worsted Co., Jasper & York Sts., Phila.

MASUREL WORSTED MILLS, INC. (4, 5)
Samoset St., Woonsocket, R. I.

Features French-spun worsted yarns, blends, fancy twists, and specialties; also Pernelle hand-knitting yarns and a new 100% nylon yarn.

Representatives at booth:
Bert Bouthiletie, New York rep.
Robert Boyaval, treas. & gen. mgr.
Jacques DeLaporte, Pernelle yarns
Mr. Howarth, Phila. rep.

MERROW MACHINE CO. (431, 432, 461)
Hartford 6, Conn.

Features application of Merrow high-speed sewing machines in knitting field.

Representatives at booth:
J. M. Washburn
W. M. Baker
E. E. Champlin
H. F. Stolzenberg
W. N. Reynolds

CLARENCE L. MEYERS & CO. (358, 359, 386, 387)
Second and Somerset Sts., Philadelphia, Pa.

Features yarns, and products made therefrom, of Durene, cotton, rayon, and blends and twists of nylon.

Representatives at booth:
Clarence L. Meyers
Milton M. Meyers
Louis Eschelbach
Harry W. Schrader
Charles E. Bender
Ernest W. Fowler
James A. Meyers
Russell Gant
Richard Gant
Gordon E. Meyers
Edward N. Myers

MILTON MACHINE WORKS, INC. (127)
Milton, Pa.

Features new 13¾-in. diameter drop-forged, heat-treated, aluminum-alloy beam heads used in fabricating beams to withstand pressures of monofilament nylon or rubber yarns; also other type beams for flat knitting.

Representatives at booth:
W. DeWitt Leinbach, pres.
George W. Blunt, production mgr.
J. Stanley Billig, sales mgr.
C. J. Anchor, Jr., sales rep.
C. J. Anchor, Sr. chief eng.

F. G. MONTABERT CO. (87)
101 W. 37th St., New York, N. Y.

Features woven labels of all types, as well as trade-mark and design creation and other services.

Representatives at booth:
M. L. Van Huele, v. pres.
Leo Greenwood
F. T. Suehle, Jr.
H. Stutman
J. J. Wyatt
Charles H. Erb
Armand Van Huele
Edgar Van Huele

L. P. MULLER & CO. (356, 357)
121 S. 5th St., Philadelphia 6, Pa.

Features cotton yarns, natural and colored; novelty yarns; spun rayons; articles knitted from these yarns such as underwear, polo shirts, hosiery.

Representatives at booth:
H. D. Muller, member of firm
J. L. Muller, member of firm
H. G. Harper, member of firm
J. M. Matlack, member of firm
J. T. Hawthorne, member of firm
H. R. Penington, sales
W. J. Scott, sales
F. H. Ward, sales
J. T. Miller, sales
T. C. Brown, sales
F. M. Shipley, sales

NARROW FABRIC CO. (295, 296, 309, 310)

Reading, Pa.

Features La-Ce-Lastic and Nuflex elastics for use on women's underwear and foundation garments in many new patterns; also an animated display of miniature figures.

Representatives at booth:
Samuel R. Fry, pres.
A. L. Lightner, v. pres.
C. J. Busch, v. pres.
R. G. Manderbach, sec.
J. W. Sweeney, asst. sec.
S. S. MacCallum
G. Dudley
P. J. Kelly

NATIONAL ASSOCIATION OF HOSIERY MANUFACTURERS (105AA)

386 4th Ave., New York, N. Y. Reception space and association headquarters.

Representatives at booth:
Earl Constantine, pres.
Reuben C. Ball, sec.

NATIONAL SPINNING CO., INC. (62)

350 5th Ave., New York, N. Y.

Representatives at booth:
Lloyd C. Kinsey, Sr.
A. M. Goodman
C. A. Allsop
Joseph R. Palermo

NATIONAL VULCANIZED FIBRE CO. (212)

Wilmington, Del.

Features parts made of National Vulcanized Fibre and Phenolite (a laminated plastic).

Representatives at booth:
J. K. Johnston, v. pres.
F. I. Crow, sec.
H. C. Hackett, sales mgr.
J. O. Otis, asst. sales mgr.
T. B. Baldridge, sales rep.
J. G. Beasten, sales rep.
D. J. Wible, sales rep.
C. H. Newson, sales rep.
C. B. Tome, sales rep.
H. L. Maier, sales eng.
E. R. Shawn, sales eng.
R. F. Bogart, sales eng.

ONYX OIL & CHEMICAL CO. (210, 211)

190 Warren St., Jersey City, N. J.

Features series of chemicals used for producing dull finish on 15-den. nylon hosiery.

Representatives at booth:
Leon P. Brick, v. pres.
Albert R. Jenny, gen. sales mgr.
Emil W. Peters, director hosiery div.
A. C. Mackey, director industrial div.
F. E. Schroeder, Chicago mgr.
Clifford R. Smith, Atlanta mgr.
Walter Huber, sales
R. Allan Watson, sales

PANAMERICAN PUBLISHING CO. (13, 14)

New York, N. Y. Textile publishers.

PARAMOUNT TEXTILE MACHINERY CO. (284, 285, 301, 302, 303, 304)

121 S. Wabash Ave., Chicago 3, Ill.

Features as "Blue Ribbon Winners" the new Paramold Retort Vertical Model 33 for preboarding half-hose and anklets with cast aluminum forms and full automatic controls; Paramold cast-aluminum preboarding forms for use on all retorts including Models 24, 29, 31, as well as the new 33; new all-metal transfer machine with stainless-steel top, self-leveling iron, adjustable speed, adjustable temperature, and quick-change irons; delux model air-cooled table for increased comfort and boarding efficiency.

Representatives at booth:
Henry Pope, Jr., pres.
William Pope, v. pres.
W. H. Albertson
O. A. Siegel
L. D. Ross
W. E. Pike
L. J. Albertson
H. Campbell
H. Richter
G. E. Dunn

PHILADELPHIA METAL DRYING FORM CO. (103, 104, 105)

Features metal hosiery-drying forms; adjustable-toe forms; multi-shape attachments; Hi-Temp intensifier tables; electrically heated forms and tables; accessory equipment, such as envelope fillers, tissue inserters, etc.

Representatives at booth:
Joseph Seligman, pres.
Thomas A. Temple, v. pres.
Harry F. Stern II, sec.

E. W. PIKE & CO. (281)

492 North Ave., Elizabeth 3, N. J.

Featuring magnifying lenses for knit-goods inspection self-illuminated by battery or service current, for field or shop use, in powers including 5X, 7X, 20X, and 40X.

Representatives at booth:
Mrs. S. N. Pike, owner
Mrs. A. Jones, rep.

MAX POLLACK & CO., INC. (89A, 89B)

Groton, Conn.

Features Lo-El nylon high-speed lustrous sewing thread; also firm's stabilized nylon sewing threads.

Representatives at booth:
Col. Max G. Johl, pres.
Col. C. E. Robinson, gen. sales mgr.
John A. Curtis, asst. mgr., New York
Chas. J. Apicelli, gen. mgr.
Walter D. Loewell, super. at Willimantic and dir. of research
Chas. Kirby, chief tech. development and quality control
Josef Pollack, chrman. of bd.
John J. Chernesky, N. E. rep.
Michael Johl, mgr., Phila.

PROCTOR & SCHWARTZ, INC. (186, 187, 188, 189, 190, 191, 192, 193, 194, 195)

7th St. and Tabor Rd., Philadelphia 20, Pa.

Features drying and boarding machines, especially the modern Proctor automatic boarding equipment for women's hosiery and preboarding equipment for nylon hosiery; also features by drawings and diagrams the Redman-process knit-fabric shrinker; photographs of conveyor dryer for pre-drying heavy - weight socks prior to boarding; also reception space.

Representatives at booth:
Charles S. Tiers, mgr. hosiery div.
B. A. Plesser
W. J. Merrigan
R. D. Helder
M. T. Fleming

THE PROSPERITY CO. (3)

Syracuse, N. Y.

Features press especially designed for finishing knit goods, model 160 PCK; also the standard 40-in. extractor.

Representatives at booth:
Mr. Miller
S. K. Ackley

QUEENS MACHINE CO. (81, 82)

280 Starr St., Brooklyn 27, N. Y.

Features full automatic links-and-links (purl stitch) knitting machine, flat double-head border machine, circular string border machine; also new improved double jack system; stresses variety of design and low maintenance.

Representatives at booth:
Raymond F. Lanthier, mgr.
Marie G. Lanthier, sec.

RAYON & SYNTHETIC TEXTILES (17, 18)

New York, N. Y. Textile publishers.

ROBERT REINER, INC. (21, 22, 23, 23A, 23B)

Weehawken, N. J.

Features 60-gage full-fashioned hosiery Twin-Knitter and 84-in. high-speed tricot machine out of company's full line of various models in tricot, raschel, Kayloom, auto-heelers, embroiderers, bobbin winders, pantographs, warpers, beam-lift wagons, etc. Motion picture showing much of this equipment will be displayed.

Representatives at booth:
Dr. Robert Reiner
Fritz Lambach
August Schoenenberg
K. T. Marx
George Moebius
John Klinck

RELIANCE ELECTRIC & ENGINEERING CO. (457, 458)

1088 Ivanhoe Rd., Cleveland 10, Ohio.

Features operating display of the Reliance V-S Drive, an all-electric adjustable-speed drive operating from a. c. circuits; also a group of various Reliance a. c. and d. c. motors stressing the new gear motor with integral reduction gearing and the new explosion-proof, corrosion-resisting motor.

Representatives at booth:
E. E. Helm, sales v. pres.
P. W. Arnold, manager, production sales
K. S. Lord, Phila. dist. mgr.
R. J. Overstreet, Greenville mgr.
C. D. Herbert, New York mgr.
M. M. Hepler, Reading application eng.
R. L. Custis, sales promotion
J. E. Walker, machine design
K. F. Ertell, adv. mgr.

RICHMOND OIL, SOAP & CHEMICAL CO. (118)

1041 Frankford Ave., Philadelphia 25, Pa.

Features scouring compounds, dyeing aids, finishes, spinning compounds, and hosiery-knitting compounds suitable for cotton, wool, and synthetics; includes Scourtex, Nyloil 360, Scourol, and Transout.

Representatives at booth:
William Alkus, v. pres.
Morton W. Levi, chem. eng.
John W. Schenkel, textile chemist
Henry Rubin, sales rep.
James Haveron, sales rep.

ROYAL COTTON MILLS CO. (217, 218)

Saxapahaw, N. C. See Sellers Mfg. Co.

Representatives at booth:
B. E. Jordan, pres., treas.
Frank Longcrier, sales mgr.

ROYERSFORD NEEDLE WORKS, INC. (390, 391)

Royersford, Pa. Reception space.

Representatives at booth:
Fred O. Heller, gen. mgr., treas.
R. W. Breidenbach, sales

S. & M. DYE WORKS, INC. (122, 123)

3419 Richmond St., Philadelphia 34, Pa.

Features dyed worsted yarn with special emphasis on the new Kelpie anti-shrink and anti-matting treated wool.

Representatives at booth:
Lindsey H. Mason, pres.
M. M. Anderson, treas.
James R. Shoch, sec.
Thos. O'Donnell, sales rep.
James Egee, chemist

SAN-KNIT-ARY TEXTILE MILLS (112C)

5423 Lena St., Philadelphia 44, Pa.

Features full line of knitted dye nets and dye bags especially designed to protect hosiery at every stage from knitting to shipment.

Representatives at booth:
Paul D. Dalsimer, gen. mgr.
Richard Reis, v. pres.

SAUQUOIT SILK CO., INC. (237, 238)

302 Fig St., Scranton 5, Pa. Reception space.

Representatives at booth:
C. Lee Havey, treas.
E. Clay West
L. W. Schoelpple
Frank N. Stanley
Murdock H. Smith
A. C. Bigelow
George M. Porges

SCHOLLER BROS., INC. (232, 233, 258, 259, 270, 271)

Collins and Westmoreland Sts., Philadelphia 34, Pa.

Features products for use particularly on hosiery together with samples of treated hosiery and knit goods stressing Durabeau hosiery finishes and the new Schollerized wool-shrinkage-control process.

Representatives at booth:
L. M. Boyd
E. S. Atkinson
John O. Sweitzer
C. H. Jones
W. H. McGuire
F. C. Scholler

SCOTT TESTERS, INC. (352)

101 Blackstone St., Providence, R. I.

Features the completely redesigned IP-4 serigraph tensile tester which has direct application to the testing of stretch and recovery of various parts of hosiery from instep to welt with resulting picturized chart for filing and/or comparison.

Representatives at booth:
David C. Scott, Jr., asst. treas.
Harold W. Horton, sales

SCOTT & WILLIAMS, INC. (142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153)

350 Fifth Ave., New York, N. Y.

Features circular machines for underwear and hosiery for men, women, children, and infants, including several models not previously shown.

Representatives at booth:
Sales and engineering personnel

SEES & FABER CO., INC. (15)

2008 N. Front St., Philadelphia 22, Pa.

Features specialties for knitting mills such as new magnifying examining glass and chain pliers.

Representatives at booth:
J. Dietrick, pres.
A. Beetle, v. pres.
C. Rudderow, sales

SELLERS MFG. CO. (217, 218)

Saxapahaw, N. C. See Royal Cotton Mills Co.

Features mercerized, Durene, cotton, and fancy combination yarns.

Representatives at booth:
B. E. Jordan, sec., treas.

Frank Longerier, v. pres. and sales mgr.

A. G. SEWELL (84A, 84B)

1617 Pennsylvania Ave., Philadelphia, Pa.

SHELL OIL CO. (83, 84)

50 W. 50th St., New York 20, N. Y.

Features textile oils including the following: Shell Vexilla oils 17 for spindles up to 25,000 rpm.; 21 for spindles at low speeds with heavy packages; K17 and L23 for needles on knitting machines; L29 for heavy-duty twister rings and light-duty high-speed looms; L33 and L39, washable oils, for looms, cams, etc.; K72 for coulter motions, carpet looms, etc. Also shows Nerita grease 2 for bearings and Darina grease 2 for service over a wide range of temperatures.

Representatives at booth:
Frank Rule, lubricants dept.
Ed Colerick, staff engineer

SINGER SEWING MACHINE CO. (24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37)

149 Broadway, New York 6, N. Y.

Features the following machines of which those marked with asterisk are new: 300W, compound or needle-feed machine for inserting flat elastic on shorts and bathing trunks; 400W30, with differential feed for knit goods and rotary take up; 400W21, plain sewer with rotary take up; 402W100*, compound or needle-feed and dron feed, rotary take up; 410W10, single-thread baster with needle-bar take up; 253*, two thread stitch, 11" skeleton arm, one and two needles, automatically oiled; 246, automatically lubricated, high-speed overedging machine; 247*, with top or bottom covering stitch and independent line of reinforced stitching; 241-12, plain sewer, automatically lubricated; 242-1, improved hosiery seamer; 248-2, electronic seamer for bonding flexible thermoplastic film; 47*, electric transmitters; several units of Singer portable tilt table units for progressive system of manufacture.

SMITH DRUM & CO. (52, 53, 54, 55, 56, 57, 58, 59, 60, 61)

432 W. Allegheny Ave., Philadelphia, Pa.

Features package-dyeing, extracting, and drying equipment, skein-dyeing machinery, rotary- and paddle-type hosiery dyeing machines. Stresses new pulsating skein-dyeing machine.

Representatives at booth:
Harry S. Drum
William C. Dodson
Albert P. March
Perry M. Parrott
Joe M. Ballentine

SONOCO PRODUCTS CO. (373, 374)

Hartsville, S. C.

Features complete line of paper cones, yarn tubes, cores, spools, spinning bobbins, and other textile paper specialties.

Representatives at booth:
W. B. Broadbent, sales
C. H. Campbell, v. pres. sales
W. A. Biggs, and other salesmen.

SOUTHERN MERCERIZING CO. (213, 214)

Tryon, N. C.

SOUTHERN TEXTILE MACHINERY CO. (392, 393, 426, 427)

200 Norton St., Paducah, Ky.

Features looping machines and looper-room accessories, especially the new Model P single-thread looper with pedestal stand and two-bulb fluorescent light.

Representatives at booth:
T. A. Paxton, exec. v. pres.
R. N. Parkin
Charles W. Holcomb
Other sales and service men

STAMPAGRAPH CO., INC. (78)

79 Alexander Ave., New York 54, N. Y.

Features hot-iron transfers in one and two colors for marking hosiery, underwear, novelties, etc.; also embossed seals and labels, printed labels, and non-toxic tattoo transfers; displays also group of stamped garments.

Representative at booth:
George Chadwick, pres.

STANDARD - COOSA - THATCHER CO. (215, 216, 239, 240)

Chattanooga 1, Tenn.

Features standard Durene, Selo, mercerized combed Sak yarn, and S-C-T thread.

Representatives at booth:
R. C. Thatcher, Sr., pres.
F. R. Harris, sec.
E. S. Davis, asst. treas., export mgr.
Wilbur S. Lawson, Chattanooga
J. P. Rickman, Chattanooga
J. S. Verlenden, chrmn. board
R. J. Mathewson, v. pres.
E. Dilimore, Philadelphia
Wm. M. Hall, Reading, Pa.
C. F. Smith, New York
R. G. Miller, Utica, N. Y.
M. A. Henderson, Chicago
J. O. Foil, Greensboro
T. Besosa, Havana, Cuba

STANFORD MARLEY DISTRIBUTING CO., INC. (1B)

505 5th Ave., New York 17, N. Y.

Features new Velox hosiery repair machine and Velox hand needle; former is a streamlined, 4-speed machine suitable for gages from 66 down, and never before shown.

Representatives at booth:
Stanford Marley, pres.
Mrs. Anne C. Chipman, sales mgr.
Mrs. Mary Marley, foreign dept.

STOP-MOTION DEVICES CORP. (106, 107, 107A, 108, 109)

1471 Fulton St., Brooklyn, N. Y.

Features Wesco electric hole and press-off detectors for open-head machines and Wesco electric running knot and slub detectors; stressing particularly new Wesco devices as follows: Sentinel press-off detectors for rib machines, retractible electric needle-protectors, safety controllers, midget safety controller, double-loop yarn carriers.

Representatives at booth:
N. J. Tellerman, dir. sales and service
A. F. Malluck, sales mgr.
G. F. Connors, rep.
V. Chapiin, rep.

SUPREME KNITTING MACHINE CO. (219, 220, 221, 234, 235, 236)

105 Johnson Ave., Brooklyn, N. Y.

Features a line of high-speed, multiple-feed circular machines and displays the following: Model SA automatic variable striper with 16 striping feeds, 24 in. diameter, knitting 8 to 10 lb. of cloth an hour at 24 rpm.; Model SA-ROF plaid and variable strip knitter, 24-in. diameter, 20 needles to inch, 32 feeds each with 3-level pattern wheel; Model MJ jersey machine capable of 100 yd. per hr. comes in various sizes to permit circular body sizes without slitting, sewing, and matching stripes; Model 1C coating machine for heavy and light-weight fleeces to produce up to 56-in. 32-oz. fabrics.

Representatives at booth:
Sidney Mishcon, gen. mgr.
Lester Mishcon; v. pres. production
Irving Golden, sales
Clyde DePuis, sales

SYNTHANE CORP. (201, 202)

Oaks, Pa.

Features laminated phenolic plastics in sheets, rods, and tubes as well as fabricated parts such as bobbins, pirns, dryer poles, hosiery examining boards, redraw chucks and tubes, nylon sizing bobbins, etc.; also macerated and laminated molded parts.

Representatives at booth:
R. R. Titus, pres.
Herbert Widdop, sales mgr.
J. K. Johnson, Philadelphia dist. mgr.
C. B. Moss, Southeastern dist. mgr.
E. E. Smith, asst. sales mgr.
M. B. Firehock, sales
N. P. Harvey, sales
R. B. Galloway, sales

SYNTHETIC YARNS, INC. (278, 279, 280)

Suffolk St., Lowell, Mass. See also Atlantic Rayon Corp.

Features yarn packages and photographs of throwing equipment.

Representatives at booth:
C. R. Steedman
T. Leo Power
Warren A. Seem

G. H. TENNANT CO. (62A, 62B)

2530 N. 2nd St., Minneapolis, Minn.

Features equipment for reconditioning and maintaining mill floors, including machines, treating materials, and supplies; and stresses improved self-propelled machines for faster cleaning; also safety-walk paint, new-type Tennant floor seal, traffic paint, new type oil cover paint, etc.

Representatives at booth:
Orville C. Hognander, v. pres. sales mgr.
Geo. D. Billings, adv. mgr.
Patrick Manfra, dist. rep.
Warner Emerson, dist. rep.
Walter Boyer, New England dist. mgr.
Robert Guthrie, Southern textile mgr.
Al Jackson, dist. rep.
Raymond Shumway, dist. rep.

TEXTILE AGE. (6, 7)

New York, N. Y. Textile publishers.

TEXTILE INDUSTRIES (208, 209)

Atlanta, Ga. Textile publishers.

TEXTILE MACHINE WORKS (318, 319, 320, 321, 322, 343, 344, 345, 346, 347)

Reading, Pa. Reception space.

Features display of a training film.

Representatives at booth:
R. W. Weaver, sales mgr.
E. A. Shoemaker, sales
P. Kroener, sales
H. Printz, sales
H. Wade, junior salesman
K. Renninger, junior salesman
W. Dufft, service mgr.
L. Yeager, needle sales
R. N. Apprich
N. E. Richards
W. Haupt, needle sales
H. Fiedler, needle sales mgr.

TEXTILE TRIMMING & BOARDING MACHINE CO. (433, 434, 459, 460)

Front and Green Sts., Reading, Pa.

Features trimming equipment for loose ends on half hose and women's seamless hosiery; turning machine for turning looped and unlooped hosiery; finishing or packing table for transferring, attaching rider tickets, folding, banding, and boxing transfer iron with adjustable thermostatic control; fluorescent looper light for light at the needle point; looper chair with adjustable feet, adjustable back, and airfoam cushion; new-type phenol-fiber expanding form for trimming or examining women's hosiery.

Representatives at booth:
F. Y. Kitzmiller, gen. mgr.
Harold E. Stout, asst. mgr.

TEXTILE WORLD (85, 86, 91, 92)

330 W. 42nd St., New York 18, N. Y. Textile publishers.

TEXTILES, INC. (8)

Gastonia, N. C. Reception space.

Representatives at booth:
A. W. Latta, v. pres.
W. T. Rankin, Jr.
P. H. Thompson
G. S. Johnston
H. G. Dolliver
Justin Pearson
L. P. Warren
A. A. Dilmmore, Jr.
S. G. Haigh

TOLHURST CENTRIFUGALS DIV. (454, 455)

Of American Machine & Metals, Inc., East Moline, Ill.

Features 40-in. centrifugal Atlas extractor with stainless-steel basket, safety cover, and automatic process timer; also 20-in. Minute Man extractor with stainless-steel basket and stainless-steel case.

Representatives at booth:
F. C. Weicker, gen. sales mgr.
J. R. Angel, sales
P. P. Johnston, sales
T. M. Broughton, sales
Ib Jensen, sales

TOMPKINS BROS. CO. (445, 446)

623 Oneida St., Syracuse 4, N. Y.

Features Model S-1, single-head, spring-needle knitting machine with furnishing wheels, electrical stop motion, etc.; also Model B-15, multiple-feed, latch-needle knitting machine with electrical stop motion, motor, etc.

Representatives at booth:
W. A. Ingalls, gen. mgr.
E. E. Cragg, v. pres.
H. A. Fairchild, knitter
S. Kuney, knitter
A. Hansen, maintenance

TORRINGTON CO. (331, 332, 333, 334)

59 Field St., Torrington, Conn.

Features latch knitting-machine needles, full-fashioned machine needles and parts, industrial sewing-machine needles.

Representatives at booth:
W. W. Bielock, asst. gen. sales mgr.
W. R. Reid, Jr., sales mgr., needle div.
C. T. Spalding, mgr., New York
W. C. Wiechardt, mgr., Philadelphia
H. D. Blake, mgr., Greensboro
F. G. Stubbs, mgr., St. Louis
C. R. Johnson, Chicago
Kenneth Lingley, Boston
Carl Epps, Southern sales

TUBULAR TEXTILE MACHINERY CORP. (203, 204)

33-61 54th St., Woodside, L. I., N. Y.

Features photographs and diagrams of Tube-Tex wet spreading, extracting, processing, drying, and calendering equipment.

Representatives at booth:
Eugene Cohn
Jules G. Walter
Donald Foreman

TURBO MACHINE CO. (160, 161, 162, 163, 164, 165)

Lansdale, Pa.

Features new Turbo equipment including electric-operated preboarding machine with 36 forms and 30-lb. gage pressure, boarding machine with quick-dry feature, VD48 preboarder accommodating 48 forms, portable leg-form stand holding 72 forms, leg-form straightener, and warp beams in standard sizes.

Representatives at booth:
Wm. N. De Turk, eng. in charge
H. W. Matthews, v. pres.
B. C. Hall, sup.
C. H. Smith, office mgr.
W. K. Wyatt, eng.
F. Huguenin
S. Dwoark
W. McCluen
W. Bergey
P. Wenhold
B. Hammel

E. W. TWITCHELL, INC. (66)

Packaging Div., 2801 N. 3rd St., Philadelphia 33, Pa.

Features textile packaging including new ribbed inserts and new satin-finished coated tissues.

Representatives at booth:
W. F. Baker, Jr., dept. mgr.
N. T. Gates, div. mgr.
F. B. Miller, New York
R. A. Cyliax, Philadelphia-Reading

UNION SPECIAL MACHINE CO. (323, 324, 341, 342, 343, 348, 349, 366, 367)

Chicago, Ill.

Features style 41300T for seaming all weights of full-fashioned hosiery; pedestal-mounted, feed-off-the-arm machine for tubular filling; Styles 61300HA and 61300KA, plain and top-roller feel lockstitch; seven styles from the Class 52800 machines for attaching cuffs, borders, lace, etc.; Style 52700 N-12 for attaching elastic bands to knit garments; Style 51400P for goring and seaming; Series 39000 for overedging, overseaming, serging, etc.; Style 39200AC for seaming light flat-knit fabric; and Style 39200 AV for blind-stitch welting or hemming.

Representatives at booth:
W. S. North, v. pres.
T. S. Whitsel, gen. sales mgr.
L. C. Morris, foreign sales mgr.
A. C. Peterson, development eng.
W. G. Booth, mgr., product-application dept.
A. J. Feigel, sales promotion mgr.
M. L. Cook, eng.
B. W. Merz, Philadelphia mgr.
J. H. Muir, Philadelphia asst. mgr.
Wm. Bleicher, New York mgr.
C. L. Rosenquist, New York asst. mgr.
W. E. Palm, Boston mgr.
A. E. Brauch, Cincinnati mgr.
Z. X. Bennett, Atlanta asst. mgr.
W. Price
Wm. Denholm
C. Batchelor
L. D. Cassell
L. J. Perrin
C. D. Mairs
W. D. Harrod
W. J. Brauch

UNITED ELASTIC CORP. (47, 48)

Easthampton, Mass.

Features underwear and hosiery webbings, including new nylon elastic webbing.

Representatives at booth:
Walter E. Dalby
H. O. Hollingworth
J. E. Thompson

UNITED KNITTING MACHINE CO. (63)

2734 N. 2nd St., Philadelphia 33, Pa.

Features re-gaging parts, knife attachment, loose-course attachment, round-heel attachment, verge plates, K. O. adjustment pieces, needle-shaft take-ups, narrowing-rod take ups, carrier-rod take ups, topping stands, transfer bars, Bakelite work rollers, steel welt-bar bridges, 15-den. pirn attachment, oil jars for 15-den., Bakelite pirn caps, seamers' racks, examining work racks, examining size racks, examining forms, cams and rollers, welt wire racks, picot locks, aluminum welt-bar lids, and Carboloy looper knives.

Representatives at booth:
Frank G. Weisbecker, owner
James De Stephen, asst.
Willard G. Moyer, sales promotion mgr.

U. S. GUTTA PERCHA PAINT CO. (96C)

Providence 1, R. I.

Features Barreled Sunlight paint products for knitting plant maintenance.

Representatives at booth:
Howard F. Eastwood, asst. sales mgr.
C. Leon Park, Southern mgr.
Paul P. Tuthill

U. S. RUBBER CO. (299, 300, 305, 306)

1230 Ave. of the Americas, New York 20, N. Y.

Features Lastex and Laton elastic yarns.

Representatives at booth:
Paul Linke
William Connelly
A. R. Engel
J. R. Malpass

UNITED STATES TESTING CO. (406, 407)

1415 Park Ave., Hoboken, N. J.

Features testing and research for the hosiery, knitted fabric, and allied manufacturers, covering fibers, yarns, and fabrics; also certified fugitive tints for the throwster; also new-type shrinkage gage and a lubricity tester developed by Nopco Chemical Co. to evaluate the effect of oil and size on yarns.

U. S. TEXTILE MACHINE Co. (93, 94, 95, 96, 97, 98)

Scranton 8, Pa.

Features three of its U. S. Acme machines in operation: high-speed, face-drive, double-deck twister for tapered end headless package twisting of low-twist combination yarns (16 oz. to 32 oz. packages); new tapered-package, double-deck twister for tapered-end headless packages of fine-denier nylon and other synthetic yarns of any given twist (8 oz. to 12 oz. packages); new high-speed spindleless spooler; a combination redraw and spooler handling yarns on bobbins, cakes, cones, pirns, or skeins (8 oz. to 24 oz. packages). The last two items are new.

Representatives at booth:
A. W. Thomas
P. J. Thomas
A. W. Thomas, Jr.
J. Saunders Williamson
E. L. Townsend
N. F. Gubitose

UNIVERSAL WINDING CO. (130, 131, 132, 133, 134, 135)

Providence 1, R. I.

Features display of two No. 50 precision winders, 6 spindles each, one gang with emulsion attachment, showing 3° 30' pineapple coning, straight-base coning, and taper-end tubing; and one 20-spindle No. 44 Roto-Coner, equipped with various attachments and operating on six different packages. Also displays its Atwood Div. Model 200 redraw in 12-spindle frame, and Atwood Model 110 double-deck, up-twister in 40-spindle frame.

Representatives at booth:
Robert Leeson, pres.
E. O. Smith, v. pres.
W. S. Warren, sales mgr.
K. H. Inderfurth, sales
William J. Quinn, sales
L. E. French, export sales
H. H. Richardson, export sales
W. L. Paulhamous, Atwood asst. sales mgr.
John R. Breen, Atwood sales

UTICA NOVELTY & MILL SPECIALTY CO. (447, 448)

2145 Dwyer Ave., Utica 2, N. Y.

Features new 12-in.-knife, motor-driven, combination strip-cutting and winding machine for knitted fabrics and woven fabrics, straight or bias.

Representative at booth:
J. A. Firsching, Jr., pres.

VALDESE MFG. CO (20)

Valdese, N. C.

Features carded knitting yarns on cones in natural, dyed, and bleached.

Representatives at booth:
E. M. Spencer, sec.-treas.
L. P. Guigou
Tom Moore, sales
W. H. Smith, sales
H. M. Boshamer, sales

VEEDER-ROOT, INC. (315)

70 Sargeant St., Hartford 2, Conn.

Features 2- and 3-shift revolution counters, course counters, measuring counters, mechanical and electrical counters; also new dozens counter for hosiery.

Representatives at booth:
A. E. Kallinich, v. pres.
W. T. Heydt, sales
J. H. Yost, sales
H. V. Barker, Southern mgr.
W. R. Soderquist, sales
G. L. Logan, div. sales supervisor

VENANGO ENGINEERING CO. (256, 257, 272, 273)

G and Lycoming Sts., Philadelphia 24, Pa.

Representatives at booth:
E. F. Slaughter, sales
J. Fred Slaughter, sales
Hugh Williams, sales
A. Robertson, treas.
C. Harry McCandless, sales mgr.

WALTON LABORATORIES INC. (181, 182, 183)

1186 Grove St., Irvington 11, N. J.

Features line of industrial, commercial, and residential humidifiers, as well as humidity controls and indicating equipment. Various models, including the filter-protected model, will be in operation. Spot humidification as well as complete systems will be described.

Representatives at booth:
William Feldermann, pres.
John B. Feldermann, adv. mgr.
J. R. Lewis, industrial sales mgr.

WAUKESHA FOUNDRY CO. (172, 173, 174)

Waukesha, Wis.

Features Waukesha positive-displacement-type pumps; also castings in rough, semi-finished and polished state of Waukesha Metal nickel alloy, stainless steel, aluminum, brass, bronze, monel.

Representatives at booth:
Emil M. Howe, sales mgr.
Richard R. Watt, Eastern rep.
Clyde Monda, Eastern rep.
Charles Schick, Mid-west rep.

WESTINGHOUSE ELECTRIC, CORP. (260, 261, 262)

East Pittsburgh, Pa.

Features package-type, adjustable-speed AV drive for full-fashioned machines; Moto-trol, a completely electronic adjustable speed drive; electronic constant-tension winder and unwinder drive with applications to warp knitting to avoid defects due to uneven warp tension; low-energy electronic relay applicable to drop-wire circuits on knitting machines; Lifeline motors in various sizes and types; magnetic and manual motor starters; AB1 De-ion circuit breaker; industrial lighting equipment; and Micarta products.

Representatives at booth will be from district offices and factory locations.

WHITIN MACHINE WORKS (414, 415, 440, 441, 452, 453)

Whitinsville, Mass.

Features Model C2 high-speed, warp-knitting machine.

Representatives at booth:
Harry Moss, v. pres.
F. Charles Sorton, sales
G. F. McRoberts, adv. mgr.

WILLIAM WHITMAN CO., INC. (362, 363)

261 5th Ave., New York 16, N. Y.

Features yarns in all-wool, all-wool shrinkproofed, spun nylon, and blends from divisions as follows: Arlington, Bradford system; Monomac, French system; Spun Fibers, Inc., American system; Nonquitt, cotton system. The spun nylon and shrinkproofed worsted yarns are new.

Representatives at booth:
Albert A. List, pres.
Martin H. Horchler, exec. v. pres.
Kenneth N. Merrill, v. pres.
Andrew W. Macy, Nonquitt mills
Clifford H. Ashley, Nonquitt Mills
John Christisen, Arlington Div.
Ernest C. Hay, Monomac Div.
Eric Powell, Monomac Div.
Eugene H. Timanus, Spun Fibers, Inc.
Robert Napier, asst. sales mgr.
Geo. M. Jolly, mgr. at Chicago
Edw. W. Robinson, mgr. at Boston
John L. Stickley, mgr. at Charlotte, N. C.
Harry C. Lewsing, mgr. at Philadelphia

WILDMAN MFG. CO. (136 137, 138, 139, 140, 141)

Norristown, Pa.

Features knitting machines of both circular and full-fashioned types in operation.

Representatives at booth:
Kenneth Howie
F. E. Paul
J. J. Brennan
Kirkland Howie
John Hill
Leon Bickel
LeRoy Brooke

THOS. WOLSTENHOLME CO. (287)

3300 Frankford Ave., Philadelphia 34, Pa. Reception space.

Representatives at booth:
L. F. Schaeffer, partner
L. F. Schaeffer, Jr., partner
F. S. Krecker, partner

Here's a good question...

MR. WOOL PRODUCTS MANUFACTURER:

Why make it shrink-resistant— if you can't wash it---

It's a question that you, Mr. Wool Products Manufacturer, should ask yourself (and answer, too!) NOW!

When you say "This Wool Garment will Resist Shrinkage", you're *inviting* your customers to *wash* it! And, whether you claim it to be *washable* or not, it better be!

Obviously, *washable* does not mean shrinkage control, alone. It also means *color-fastness*. Any fabric, if it's *truly washable* must be shrink resistant *and* color-fast. In short, *washable* means SAFE TO TUB, SAFE TO RUB, under all normal washing conditions.

wool products ARE WASHABLE when they're...

Schollerized
WASHABLE WOOL
SAFE TO TUB • SAFE TO RUB

The SCHOLLER WOOL SHRINKAGE CONTROL PROCESS* removes the primary cause of wool shrinkage—matting and felting—without any effect upon the inherent resiliency, elasticity, recoverability and texture of the original wool. The treatment of the wool involves the addition of no foreign materials, therefore no change in weight and feel or "hand". Appearance is unchanged while the true comfort and useful life of the processed wool fabric is greatly enhanced. The strength of the Schollerized yarn is generally the same or greater than the original. Extremely flexible in application, wool may be Schollerized in the raw stock, tops, skeins, packages or fabric.

*U. S. & Foreign Patents Pending

Write Today For Full Details On The Amazing Scholler Wool Shrinkage-Control Process applied to YOUR product!

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The flyers illustrated above represent but a small part of the many types designed and produced by the Herr Manufacturing Co. Inc. We construct flyers for EVERY mill requirement; and our flyers are handling every type of yarn, from the finest of hosiery yarns to tire cord. If you have a problem involving a special bobbin, a special spindle, or an unusual yarn, we can design a flyer to fit your particular circumstances.

Every Herr flyer is perfectly balanced to assure accurate yarn control. Durable construction and light weight permit high operating speeds. Flyer wires are installed in such a way that they are firmly held and remain permanently in their original positions. Vibration is thus substantially reduced, and uniformity of yarn tension is correspondingly increased. Cleaning and rewiring is reduced to a minimum.

The eccentric, or bearing part of the flyer, is constructed of nylon and requires no lubrication. It can be had in many colors. The latter feature is especially useful for identifying lots and counts of yarns, also for keeping flyers separated by types and spindle sizes and for maintaining flyer wire changing schedules.

For top quality throwing, always use Herr flyers. Feel free to consult us at any time on your flyer problems. Our engineers are at your service at all times.

We will have a wide assortment of Herr flyers, as well as Herr Conical Rings in all sizes, on display at the Knitting Arts Exhibition. Drop in at booth 96BB for further particulars.

HERR MANUFACTURING CO., INC.

318-320 FRANKLIN STREET

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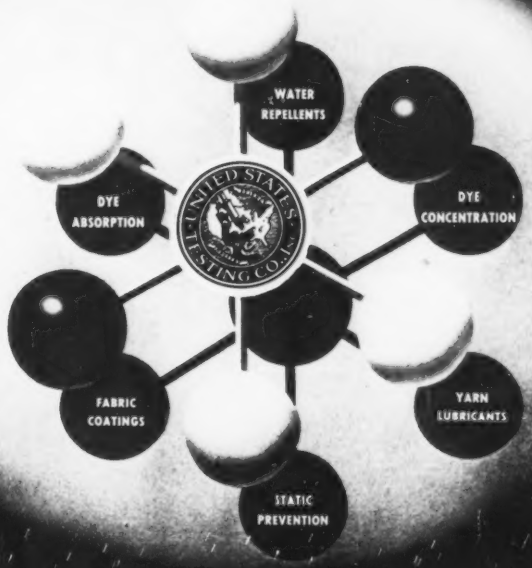
ANNOUNCING FURTHER OPPORTUNITIES FOR PRACTICAL APPLICATION OF ATOMIC ENERGY:

Radioactive Isotopes

AVAILABLE TO THE TEXTILE INDUSTRY FOR APPLIED RESEARCH



The United States Testing Company, Inc., brings to the textile industry, the newest tool in research . . . the fruits of the investigations in atomic energy. A special laboratory, under the supervision of specially trained technicians, now employs Radioactive Isotopes in conducting researches never before possible . . . for every industrial field.

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- Controlling the concentration in dye baths.
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- Study of intermediate reactions in the manufacture of dyestuffs.
- Eliminating static conditions in mills.
- Measuring the distribution of lubricant on synthetic yarns.

We welcome correspondence and conferences with those in the textile industry who would like to discuss the possible uses of Radioactive Isotopes in their particular fields of work.

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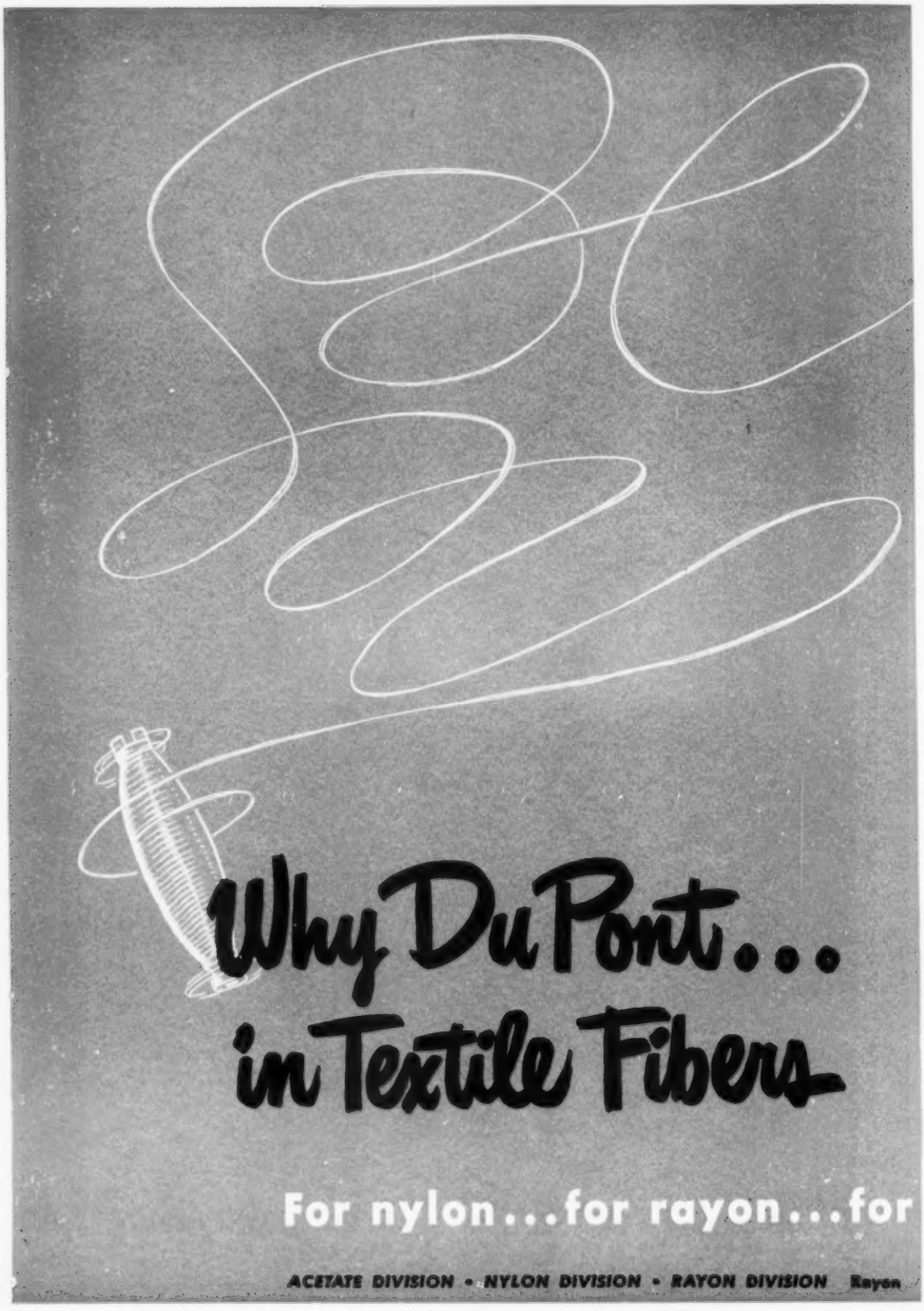
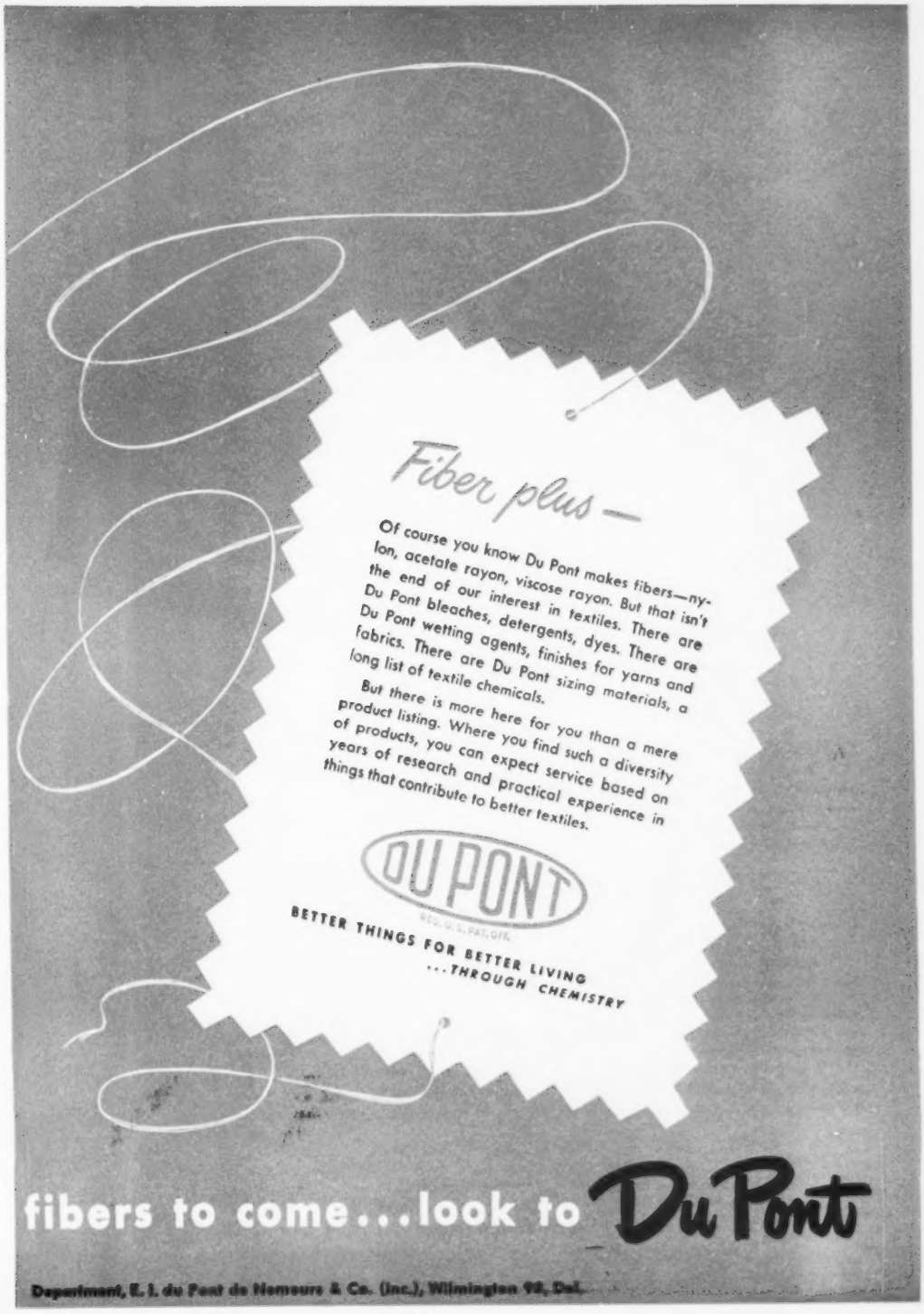

Why DuPont...
in Textile Fibers
For nylon...for rayon...for
ACETATE DIVISION • NYLON DIVISION • RAYON DIVISION
Rayon


Fiber plus—
Of course you know Du Pont makes fibers—nylon, acetate rayon, viscose rayon. But that isn't the end of our interest in textiles. There are Du Pont bleaches, detergents, dyes. There are Du Pont wetting agents, finishes for yarns and fabrics. There are Du Pont sizing materials, a long list of textile chemicals.
But there is more here for you than a mere product listing. Where you find such a diversity of products, you can expect service based on years of research and practical experience in things that contribute to better textiles.
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BETTER THINGS FOR BETTER LIVING
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fibers to come...look to DuPont
Department, E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Del.

WHEN she wants new nylons, she makes a bee-line for the brand she knows. They've always been dainty, smooth-fitting, beautiful. They've never snagged as much as other brands. And she can wash them again and again and again, knowing that each time they'll come out as good as new.

She doesn't know the finish used to give her this satisfactory service. BUT . . . You should know that these qualities are the ear-mark of

ETERNALURE

RESIN FINISH FOR NYLONS

And you should also know that besides producing a better finish, which helps sell nylons, ETERNALURE cuts finishing costs in the mill.

It gives body to sheer hose that makes them easier and quicker to handle. It reduces the number of menders because there are fewer pull threads. There are no chalky deposits due to uneven deposition. It involves no changes in operation or equipment . . . no curing . . . no heat treatments.

If you are interested in better selling nylons at lower over-all finishing costs, why not give ETERNALURE a mill-scale tryout? A complete breakdown in the finishing department after such a run will prove its superiority every time.

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April 25-29

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Nineteen hundred and forty-nine

Fredericka Boger
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Nylon processing for hosiery, tricot knitting and weaving — when under the scientific guidance of expert technicians — answers your "call" for yarn throwing to meet the most exacting requirements. Our modern plants, well-equipped laboratories, humidity controls, temperature check-ups and cleanliness in every phase of processing, produce uniform nylon, rayon and silk yarns of superb quality.

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Chose FOSTER MODEL 102 WINDERS

After one of the most dramatic modernization programs in textile history, the Bachmann-Uxbridge Worsted Corp. of Uxbridge, Mass. is today running full time, whereas many other woolen mills are shut down or on sharply curtailed schedules.

It is significant that this mill, like many others, included Foster Model 102 Winders in its new equipment. The Model 102 features, which undoubtedly influenced its decision, are as follows:—

1. **FLEXIBILITY** — Will handle any count or type of staple yarn with same traverse mechanism — any angle of wind from 9° to 18° — any ordinary taper. Can be equipped to produce any type of package.

2. **INCREASED PRODUCTION** — Twice that of obsolete models. Winding speeds up to 700 y.p.m.

3. **ECONOMY** — Operating cost 1/3 less than that of obsolete models. Repair costs as low as $3.50 per year per 100 spindle machine.

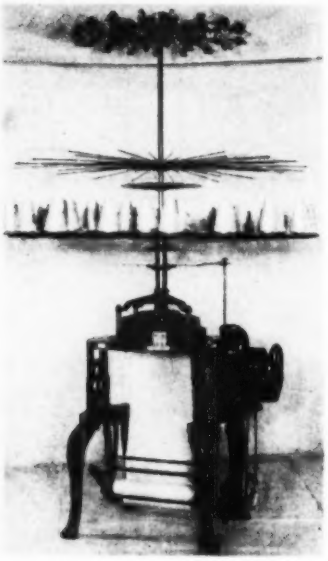
4. **QUALITY PRODUCT** — Automatic inspection. Conditioned yarn, if desired. No ribbon wind. Minimum breakage on soft twist yarns.

Make Foster Model 102 a part of YOUR modernization program. Send for Bulletin A-95.

FOSTER MACHINE CO., Westfield, Mass.

Southern Office: Johnston Building, Charlotte, N. C. • Canadian Representative: Ross Whitehead & Company Limited, University Tower Building, 660 Ste. Catherine Street West, Montreal, • European Representative: Muschamp Taylor Limited, Manchester, England.

Trouble-Free Knitting-High Production *by* TOMPKINS



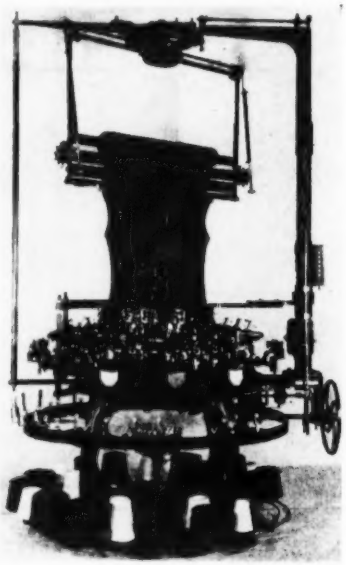
The Tompkins Model S-1 is the finest in high speed spring needle knitting machines. Set up at factory for any class of work desired. Feeds and gages may be quickly changed to produce a wide range of cloth—from rugged overcoat material to fine underwear fabrics. Furnishing wheels, visual-signal electric stop motion and cylinder lighting insure perfect cloth in large volue. Interchangeable cylinders—16" to 35" and gages from 5 to 50 provide maximum flexibility.

★

Established
1846

Over a century of continuous service to the knitting industry throughout the world.

★



The Tompkins Model B-15 is a multiple feed latch needle machine engineered to produce maximum volume of work at minimum cost. Completely factory equipped, it requires only a few hours to install and place in operation. Simple design minimizes maintenance and attention—makes it easy to operate. Electric stop motion eliminates imperfections and waste—stationary take-up permits close inspection of cloth at all times. Available in cylinder sizes 9" to 24" and in gages up to 42.

"SEE OUR EXHIBIT AT THE KNITTING ARTS EXHIBITION, BOOTHS 445-446".

TOMPKINS BROS. CO.

INCORPORATED

ONEIDA ST. SYRACUSE, N. Y.

STANDARD Durene*

makes it easier for you to produce and sell more knit goods...

Made of Durene multi-ply mercerized combed cotton yarn
4 WAYS BETTER than ordinary cotton yarns
EXTRA COMFORT ---more absorbent
EXTRA STRENGTH ---longer wear
EXTRA QUALITY ---lasting lustre
EXTRA SERVICE ---easy to wash

*Reg. U.S. Pat. Off.

If you are a Durene licensee or plan to be—you will want to get your share of the new business being created by the big new national Durene campaign starting April in Saturday Evening Post, Good Housekeeping and Ladies' Home Journal.

One of the surest ways to get your share is to run STANDARD Durene – ***produced under our complete control from raw cotton to finished yarn — 10's to 120's ply, natural, bleached and dyed.*** Ask the STANDARD representative nearest you for recommendations.

STANDARD DURENE • SAK GASSED and MERCERIZED THREAD YARNS

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Since 1893 in the hosiery and knitting trades, the name Heineman has stood for efficiency, reliability and skilled workmanship.

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DIVISION OF AETNA INDUSTRIAL CORPORATION

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A WIDELY ACCLAIMED

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Where a soft, smooth "hand" is required, your selection of a cationic finishing agent is most important. DRUCOMINE A economically imparts the desired finish effect to fine fabrics, while assuring maximum preservation of light-fastness and safety to sensitive shades.

DRUCOMINE A can be employed successfully alone or in conjunction with synthetic resins. Samples and literature upon request.

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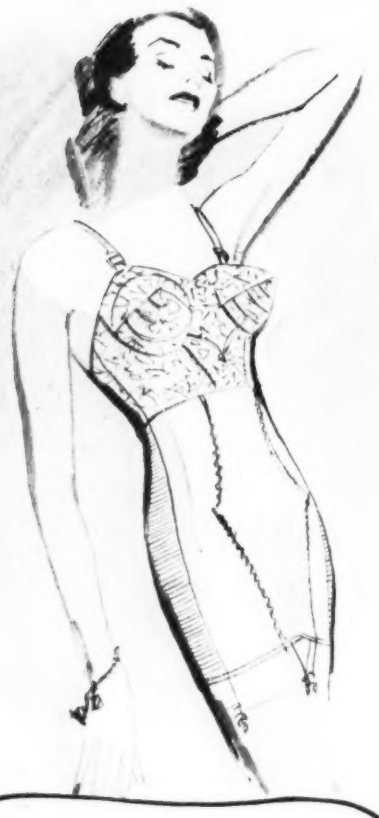
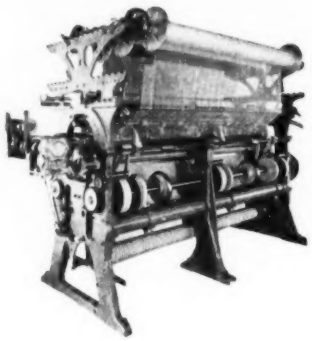


Cut your knitting cost on ELASTIC FABRIC

Elastic net for girdles, foundations and brassieres knit on the *Kidde* Knitter is creating a sensation in the market today. The quality is outstanding —the production rate exceptionally fast.

New high speeds are being maintained with exceptional efficiency on the *Kidde* Knitter—because it is ruggedly built to absorb the strains of elastic. The power let-down for controlling the rubber beams is non-electric, reliable in action. The needle bar motion is specially designed for high speed with heavy loads.

When you use the *Kidde* Knitter, your costs go down on elastic net—and on these other fabrics, too: dress fabrics; veilings and nettings; dishcloth material; curtain fabrics; narrow fabrics; shoe cloth; laundry nets; knitted outerwear fabrics for sweaters and polo shirts.



See the new Model C *Kidde* Knitter at the Knitting Arts Show

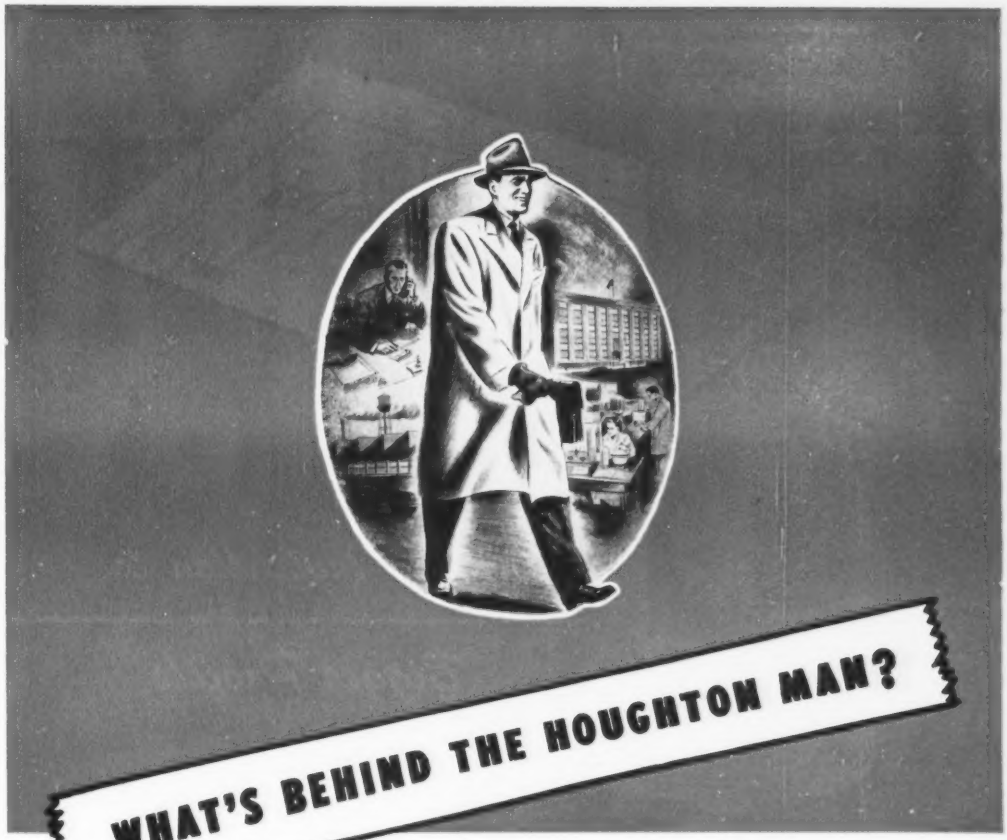
Be sure to visit Booths 442, 443, 450 and 451, and see the new Model C—on display for the first time. New features have been added to the proved advantages of the *Kidde* Knitter—advantages that have made it the most popular Raschel machine in the trade.

Free literature is available on the Kidde *Knitter. Write for your copy.*

The word "Kidde" is the trade-mark of Walter Kidde & Company, Inc., and its affiliated companies.

Kidde Knitter

KIDDE MANUFACTURING CO., INC. • BLOOMFIELD, NEW JERSEY



Time-tested products? Yes, of course. Those of interest to knitters, listed below, are built on the "know-how" that comes from 84 years' experience.

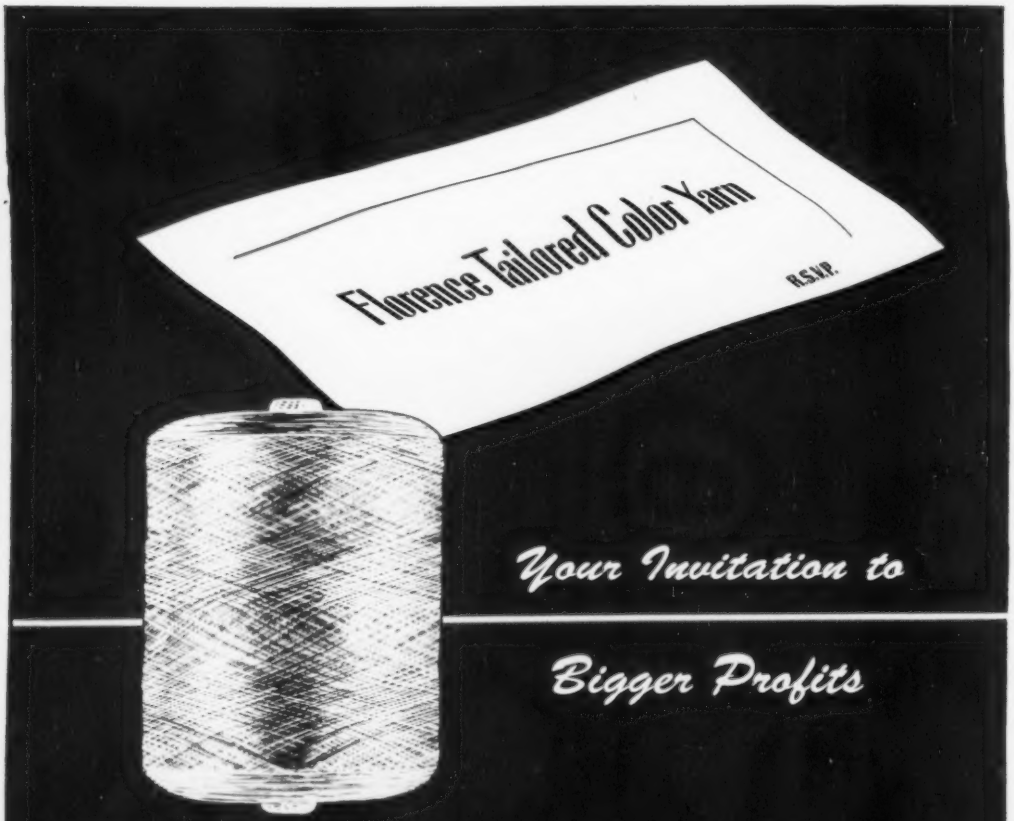
Laboratory Service? Yes, sir! Our research laboratories, always important in this business, were expanded recently to permit greater service and original product research for textile processors.

Field Service? Again, yes! Technically trained men assigned to textile areas assist our regular field representatives in application tests to prove the value of Houghton processing materials being offered.

So, with field offices in all principal cities, four well-located plants—one a recent addition solely for chemical manufacturing — and a technically trained force covering every industrial area closely, Houghton is set up to be of real aid. For data on specific products to help you produce more and better goods at lower cost, write E. F. Houghton & Co., Philadelphia 33, Pa., or Charlotte, N. C.

See these Houghton products at Booths 89-90, Knitting Arts Show

DETERGENTS • WETTING AGENTS • RAYON OILS AND SIZES • WOOL OILS
LUBRICANTS • TEXTILE LEATHERS • BELTING



Your Invitation to

Bigger Profits

You are cordially invited to make bigger profits!

A better product means bigger profits, and by using *Florence Tailored Color* you can improve your products.

Florence Tailored Color is our exclusive dyeing and processing of cotton, wool, synthetic or blended yarns by special laboratory and technical methods, giving you the exact *color* you specify, the exact *fastness* you specify, and the *quality* you require. *Florence* alone gives you *Tailored Color*. The yarn is either supplied by you or obtained by us.

This is an invitation worth accepting. R. S. V. P.

FLORENCE THREAD CO., INC.

ESTABLISHED 1894

Fairview Street, Riverside, New Jersey—Phone Riverside 4-0211

New York Sales Office: 55 W. 42nd Street, New York 18, N. Y.

Package Dyers and Processors of Cotton, Wool, Synthetic and Blended Yarns

Processors and Distributors of "ILSTEX"* Industrial Sewing Threads

*Trade Mark Registered U. S. Pat. Off. By United States Rubber Company

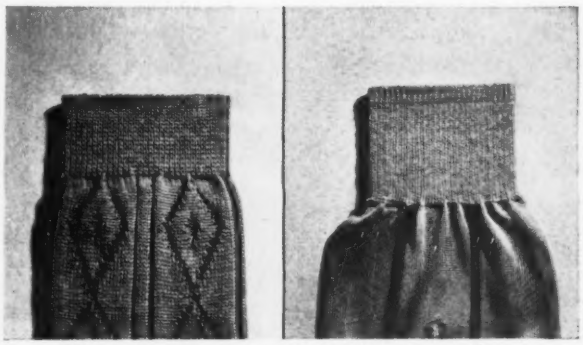
First of a Series of New Devices for Increasing the Profits of Mills Operating Scott & Williams Knitting Machines

SCOTT & WILLIAMS *Announces*

A New Automatic Rubber Furnishing Device

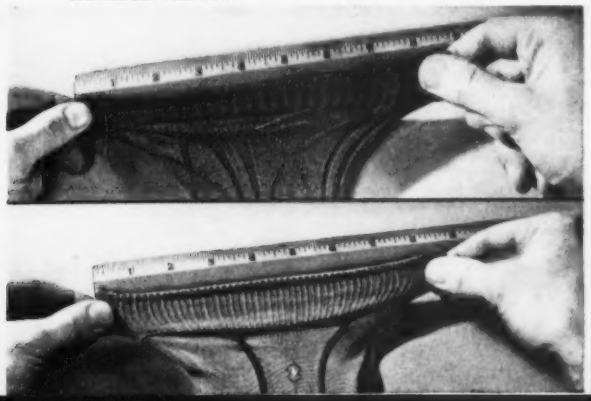
For Komet, Komet Links-and-Links and HH-PW Machines

The new device eliminates yarn drag from the cone and delivers the yarn, under the desired uniform tension, between traction faced cones. Device handles all weights of rubber yarn. Nothing to get out of order.



(*Above*)—The uniform appearance of rubber hosiery tops provides a new and powerful sales feature. Tight or loose courses, a principal cause of seconds, are eliminated.

(*Below*) Greater stretch and uniform elasticity assure better fit and longer wear for any size leg, thus offering new selling opportunities for both mill and retail store.



The Scott & Williams Automatic Rubber Furnishing Device assures—

1. **Delivery of rubber yarn at uniform tension**
2. **Elimination of seconds due to tight and loose rubber thread courses**
3. **Uniform ribbed rubber tops of maximum stretch**
4. **Elimination of production waste and delays due to rubber yarn breakage**

This new Rubber Furnishing Device is easily installed, completely automatic and self-contained. Tension of the rubber yarn is always uniform and can be set as required. The device is immediately available for use on the Komet, Komet Links-and-Links and HH-PW machines and will be ready for other models in the near future.

The new standard of uniformity of stretch it provides, plus the improved appearance of the fabric tops, spells better wearer satisfaction and greater profits. Call your Scott & Williams representative for complete details.

S·W

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* 2 BAR AND 3 BAR TRICOT MACHINES

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SECTIONAL AND

* you can see these machines in at the Knitting Arts Exhibition

MAKE TOMORROW'S FABRICS WITH REINER HIGH SPEED MACHINES

OUR FULLY ILLUSTRATED CATALOGS ARE YOURS FOR THE ASKING

VISIT OUR PLANTS AND PERMANENT SHOWROOMS IN WEEHAWKEN

complete line of knitting machinery developed . . . with the accent on large, trouble-free production

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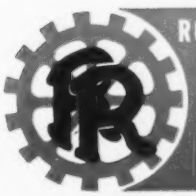
operation

Atlantic City . . April 25th-29th

BOOTHS 21-23B

You are welcome



ROBERT REINER INC.

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WESTINGHOUSE ANNOUNCES THE NEW ALL-ALUMINUM PRECIPITRON*... MOST EFFICIENT AIR CLEANER EVER BUILT

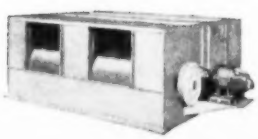
Now PRECIPITRON is more effective than ever!* Introduced more than ten years ago by Westinghouse, PRECIPITRON*, the electronic air cleaner, has opened important new avenues of cost reduction for business and industry. For only the PRECIPITRON* principle eliminates up to 90% of all airborne dirt, smoke, dust, soot and industrial oil mists, compared to the 10% to 20% efficiencies of ordinary mechanical filters.

The new, all-aluminum PRECIPITRON* cell now offers more advantages that mean additional savings—

1. **25% More Plate Area Per Cell.** Means lower costs for cleaning a given volume of air. For, each PRECIPITRON* Dust Collector Cell has 25% more collection area than before. This permits more compact installation with resultant savings in space and equipment.
2. **All-Aluminum Construction.** Means lower maintenance and installation costs. For, as the only electronic air

*Reg. U. S. Pat. Off.

REFRIGERATION CONDENSERS



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25% MORE PLATE AREA per cell

cleaner with aluminum frames as well as cells and ionizers, PRECIPITRON* has an exceptionally high resistance to corrosion and rust—needs no protective coating. And, there's not a single part—with exception of power pack—which cannot be handled by one man without auxiliary lifting devices. Heaviest piece weighs only 50 lbs. So, PRECIPITRON* is assembled quickly, easily—with resultant savings in labor costs.

For more information on this new PRECIPITRON* and how it can significantly cut dirt-caused losses in *your* business or industrial operations, call your nearest Westinghouse office. Or, write to Westinghouse Electric Corporation, Sturtevant Division, Hyde Park, Boston 36, Massachusetts.

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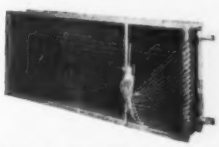
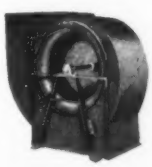
REFRIGERATION COMPRESSORS

AXIAL FLOW FANS

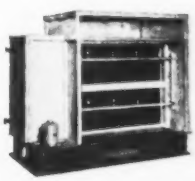


HEATING AND COOLING COILS



CENTRIFUGAL FANS

UNIT AIR CONDITIONERS



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booths 110-11-12-13-14-15,
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Developed to meet today's requirements,
these machines have
proved their superiority all over the world.
See them and you will see the finest.

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CROSS DOUBLE CARDED YARN

Is Double Quality Knitting Yarn

There are two definite reasons. First, there is the cotton we begin with... Strict Middling . . . the only grade we buy. Second, two cardings are better than one... we make sure to take out the short fiber and fine leaf that the first carding missed.

So it's no wonder that CROSS Double-Carded Yarn (bleached or dyed on cones) is equal, if not superior, to ordinary combed yarn. That's why in these days of quality-minded consumer buying, more knitters are using more CROSS Double-Carded Yarn than ever before.

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You can "profit-knit" variable stripes with . . . Supreme's Model SA

What does "Profit-Knit" mean?
"Profit-Knit" means high-speed, non-stop, uniform, "clean as a whistle" production of easily marketable variable striped fabrics. That's what you get with Supreme's Model SA Automatic Variable Striper.

How fast will the SA Produce?
Knits 25 yards of multi-color variable striped jersey per hour. 24" diameter machine operates at 24 R.P.M. with all 16 feeds producing *all* the time.

What makes this high production possible?
1. Yarn stand is stationary; cylinder and take-up revolve.
2. Unique, concealed method of camming permits color change without *any* slowdown.

Is production affected by stripe selection?
You can stripe in one course or a million courses–yet all feeds keep knitting. Up to 4 colors on each feed.

What does "non-stop" mean?
The stationary yarn stand principle permits loading double-tied cones. 24 hour operation without cone replacement.

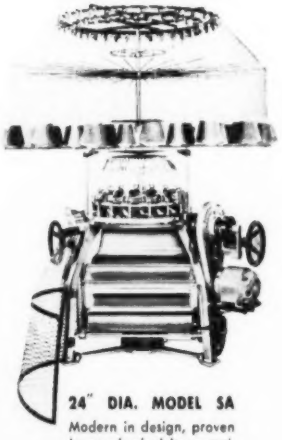
What is "clean as a whistle" production?
Fabric made on the Model SA has no braid of waste along the seam. Easier finishing, too.

Why is SA fabric "easily marketable"?
Uniform, even stitches maintained throughout. New type spreader lines up stripes so that they go on the roll-up straight. Simplifies finishing and matching.

Is the Model SA easy to operate?
Rotary drum method makes selection of width and variation of stripes quick and easy. Camming method eliminates "rifle shot" noises when color changes; gives you a quiet mill.

What about pattern wheel work?
The SA is built to receive the necessary parts for a quick changeover to a Model SA-ROF for 3-Position "Floatless" plaids, checks and designs.

How can further information be obtained?
Simply write, wire or 'phone for complete, free information.



24" DIA. MODEL SA
Modern in design, proven in use, backed by experience.

SUPREME
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SK-117

"Supreme will present two new and unusual knitting developments at the Knitting Arts Exhibition. See them at Booths 219, 220, 221, 234, 235, 236."

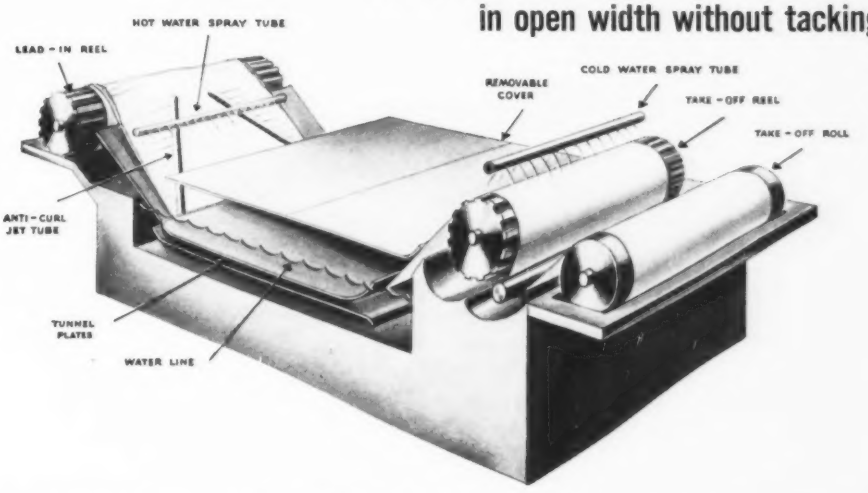
Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N.Y.

June, 1947

New tricot pre-setting machine developed by Avisco

Pre-sets acetate tricot in open width without tacking.



A NEW MACHINE for pre-setting acetate tricot fabrics has been developed by the American Viscose Corporation Textile Research Department. As shown in the illustration, sprays of boiling water are utilized to uncurl the edges of the fabric and to keep them uncurled until the fabric enters the setting unit. This unit consists of two plates set approximately ½" apart, the width of the plates being the width of the material and the length being approximately 6 ft. The fabric enters the tunnel between the two plates in a flat condition and, owing to the close proximity of the plates to each other, is prevented from further movement as regards curling. The two stainless steel plates are immersed under boiling water so that the fabric is set by passing through a boiling water solution. The time can be varied between 3 and 24 seconds. After emerging from the plates, the fabric is sprayed with cold water to complete the setting operation, at which time the fabric no longer shows any tendency to curl and can be dyed in a flat condition without tacking.

The tricot pre-setting machine is expected to increase the percentage of first-quality goods. It eliminates the necessity of tacking and the consequent untacking. It prevents "crow's feet" and crease marks and the goods emerge from the dryer with a straight course line. Because of the lack of curled edges, the fabric can be dried quite close to the edge and thus save material. Other advantages are improved hand and appearance, control of stability, and ease of handling.

The machine will be manufactured by Van Vlaanderen Machinery Company, Paterson, N. J. Its capacity will be 2500 yards of acetate rayon fabric per hour. Made of stainless steel, it will be useful with a wide variety of textile chemicals. Its 15 x 16 foot size will accommodate full width tricot goods. Estimates indicate it should pay for itself in a short time in dye houses finishing big lots of tricot fabrics.

American Viscose Corporation has patents pending on this development.

MAKE USE OF *Avisco* 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

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Laurel Boil-Off Oils and Compounds for more effective degumming of pure silk, rayon and cotton mixtures.

Laurel Emulsions and Softeners for better quality, better knitability, proper conditioning, proper regain.

Laurel Hosiery Finishes for softer, smoother appearance, greater freedom from snags, more wear.

Laurel Nylon Finishes for speedier processing, improved hosiery quality.

Laurel Olamine, cation active softener for exceptionally soft finish on dyed rayons.

Laurel Rayon Oils for faster, softer yarns, improved appearance and hand of your rayon.

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Laurel Wool Scouring Compounds for speedier detergent action, clearer, more even dyeings, cleaner, softer, loftier wool.

Laurel Special Finishes, Water Repellents, Mildewproofing and Flameproofing Compounds.

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For over thirty-nine years Laurel has been meeting successfully myriad challenges of leading dyers, bleachers and finishers. From this reservoir of experience and service has come the long line of Laurel processing agents to give you better, more efficient processing for every dollar you spend.

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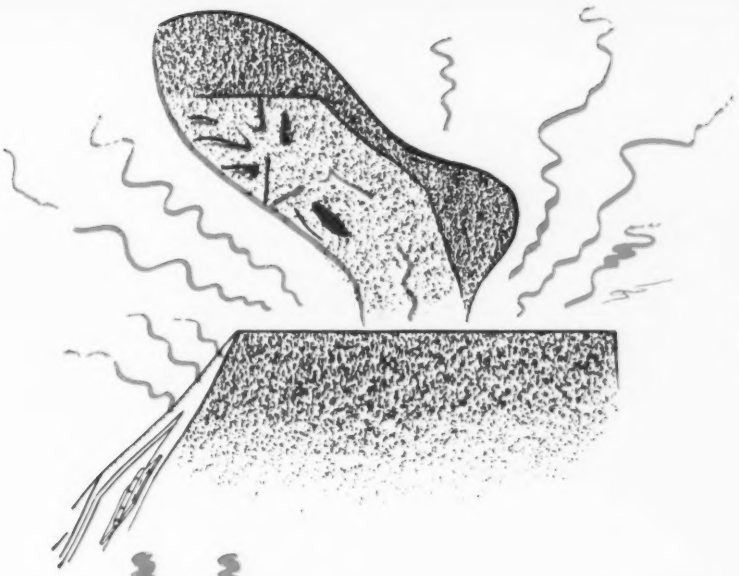

Ouch! said the 15-denier Nylon

"That's too hot for me"

Your fine denier, fine gauge Nylons require a very low temperature in finish boarding, while your heavier weights require higher temperatures. With Turbo a turn of a dial gives you just the temperature you want for the job at hand. Result: static-free stockings, perfectly finished. It is just as simple as that.

Turbo Finish Boarder is made up of 48 forms —four groups of 12 forms each. These four groups operate in pairs, with one group being stripped and dressed while a second group is in the drying chamber. When the drying is completed, the doors of the chamber open and the finished stockings move out and "open ranks" for quick and easy stripping and dressing. At the same time the dressed forms "close ranks" and move into the drying chamber . . . The operation is simple and unhurried—and yet, with two operators, it produces up to 260 dozen pairs per 8-hour day!

Make it a point to see Turbo Finish Boarder in operation at the Knitting Arts Exhibition. Let us send you the Turbo folder today.

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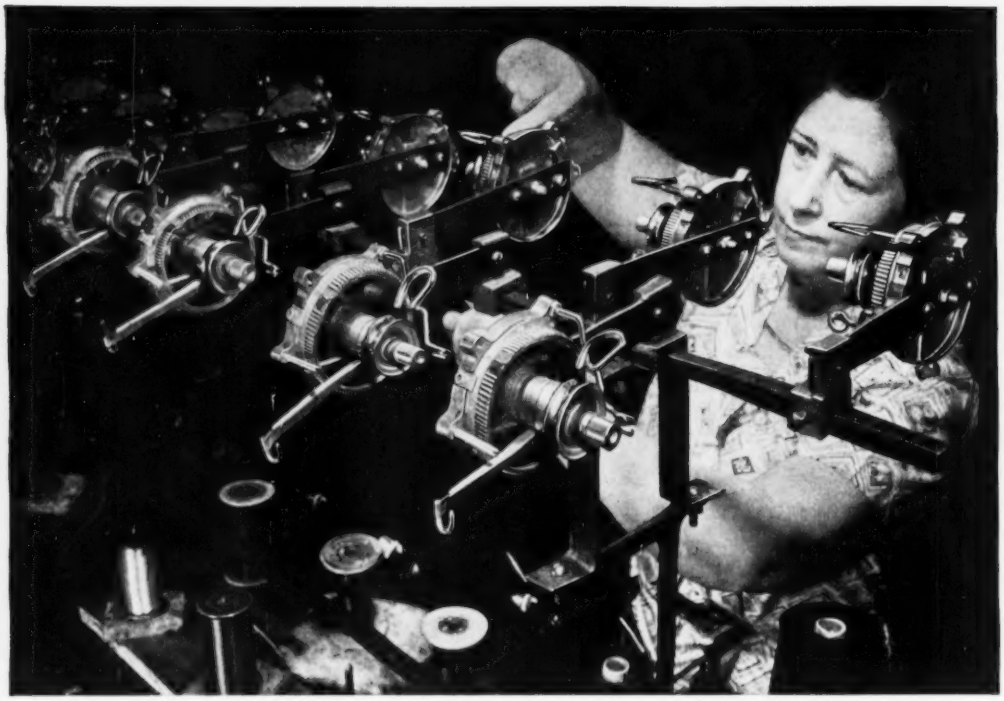
TURBO PREBOARDER
No banging or jolting to injure the fabric or jangle the nerves. Two groups of 18 forms each—you can change 36 forms in 5 minutes. Produces up to 180 dozen pairs in 8-hour day, with one operator. Write for folder.

TURBO
Finish Boarder



"HERE'S HOW WE CUT TAFFETA SPOILAGE TO LESS THAN 1%!" *say Frick & Eaton*

Quills wound with uniform tension—important in *any* textile mill—are *doubly* important at Frick & Eaton, commission weavers of the finest-quality fabrics for the most discriminating buyers.

Always on the lookout for new ways to raise their exacting standards still higher—and to keep spoilage down to the barest minimum—Frick & Eaton investigated the *Kidde* Tension Compensator as a means of winding uniform quills of synthetic filament yarns.

Result? Spoilage from imperfect quills has been reduced to less than 1%! Scarcely a single shiner has been seen in taffeta since the Compensators were installed.

Of course, quill winding is just one of the many mill processes in which the *Kidde* Compensator yields remarkable results. In warping, plying, dye package and filling winding, the Compensator is *automatically* maintaining uniform tension—regardless of such variables as yarn speed, coefficient of friction, or input tension changes as high as half the tension setting.

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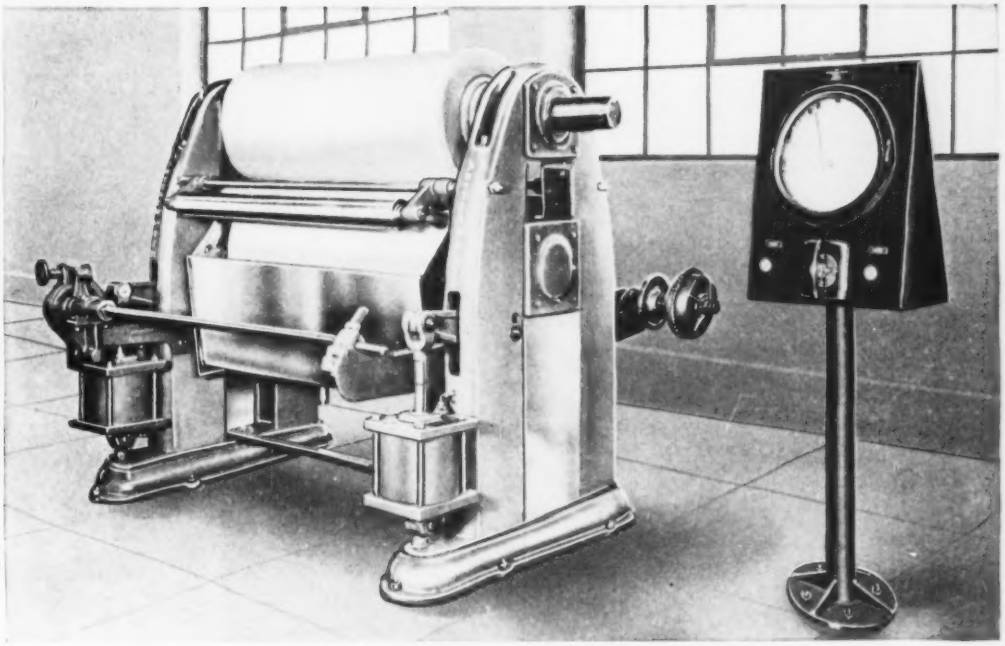

Front view of 2-roll Butterworth "Bullet" Padder for heavy duty.

New "Bullet" Padders Shatter Finishing Costs

- Rolls are interchangeable—from 12 to 20 inches in diameter
- Makes tearing out frame unnecessary when converting rolls
- No loss of operational time

The new Butterworth "Bullet" Padders go straight to the heart of your finishing problem. Rolls are interchangeable. Pressures can be varied from zero to 15 tons. Can be used on rayon, cotton or wool.

The new "Bullet" Padders are more *flexible*, more *interchangeable* and more *basic* than any padders now in use! Here is truly an outstanding contribution to finishing plant economy. Substantial savings in labor, and production time can now be realized.

For example, it is now possible to convert a 4-ton Butterworth "Bullet" Padder into a 15-ton padder without tearing out an entire frame, or without loss of operational time. In making a conversion, only rolls have to be changed; basic parts of the machine remain the same. No more separate rolls are needed for each operation. With the new "Bullet" Padders, rolls in any diameter from 12 to 20 inches can be used.

The new Butterworth "Bullet" Padders have a streamlined, bullet-shaped frame—trim in appearance, compact in design, extremely functional in operation. Find out how you can shatter finishing costs and build profitable production volume with the new Butterworth "Bullet" Padders. Get all the details on these new machines today. Write or call:

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H. W. BUTTERWORTH & SONS COMPANY, Phila. 25, Pa. • Providence Div., Providence R. I. • 1211 Johnston Building, Charlotte, N. C. • In Canada: W. J. Westaway Co., Hamilton, Ont.

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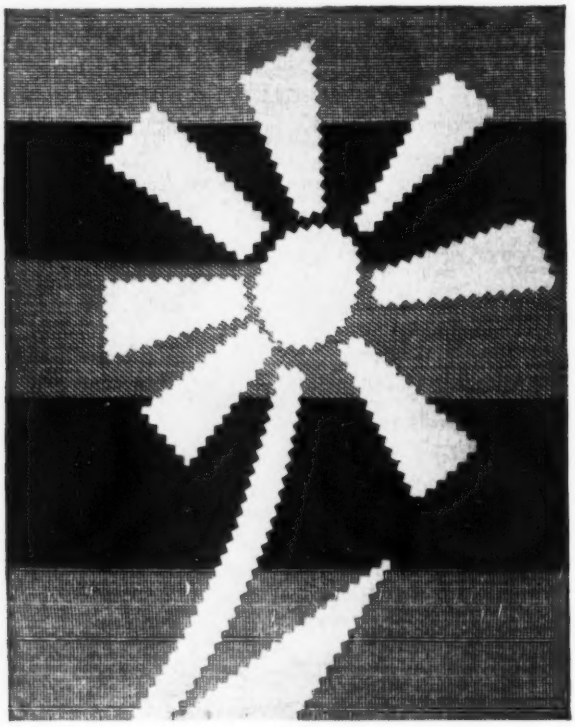
"The good rayon suit"
...cool approach to volume sales



A fine combination of cool, well-groomed comfort plus excellent style—that's the fast-selling rayon suit, which is currently making big news in the mens-wear market. Don't miss the profits due you. Celanese Corporation of America, 180 Madison Avenue, N. Y. 16.

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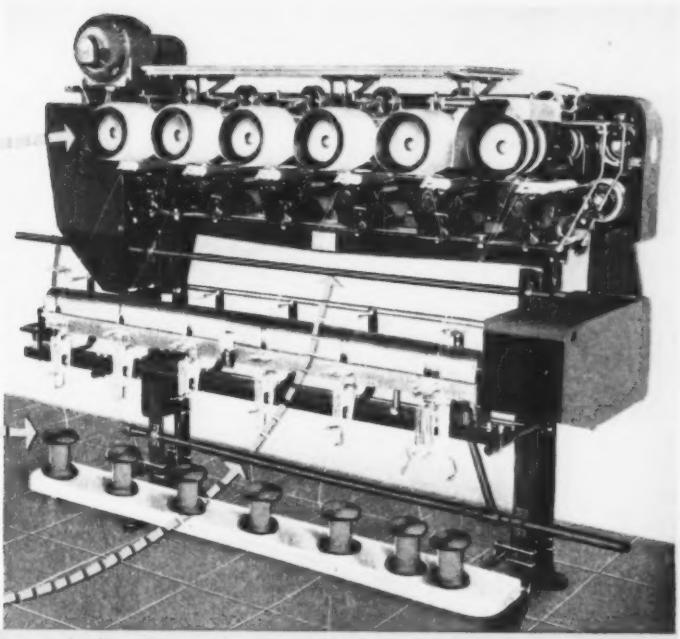

IMPROVE TEXTILE PRODUCTS AND PROCESSES WITH SYNTHANE

Synthane laminated plastics have a *combination* of characteristics singularly suitable for the textile industry. Chief among these are Synthane's light weight, high resistance to crushing forces, resistance to corrosion and smooth finish. Pictured above are several interesting examples of Synthane's use.

BOBBINS FOR NYLON SIZING

Synthane laminated plastic nylon sizing bobbins are highly resistant to the corrosive action of nylon sizing solutions. While light in weight and capable of being started and stopped faster with little power, they stoutly resist the crushing action of drying yarns. Available either plain or with longitudinal grooving.

BOBBINS AND NON-SNAGGING REDRAW CAPS

A few of Synthane's outstanding advantages as a material for bobbins are its denseness, smoothness, stability with changes in temperature, and ease of machining. Bobbins made from Synthane are well balanced and light, and they help attain higher spindle speeds, improved quality of finished yarns, and reduced maintenance costs.

Avoid damage to yarn by using Synthane redraw caps. They are smooth, have no sharp corners and can't snag. Slightly damaged bobbins can often be restored to usefulness by the use of these caps.

SYNTHANE PIPING FOR NYLON SIZING MACHINES

Synthane designs and fabricates laminated plastic piping systems for all types of nylon sizing machines. The polyvinyl alcohols and other commercial sizes used to protect fibre in handling have little effect on Synthane. Ask our engineers to help develop your system.

For more information about Synthane's uses in the textile industry mail the handy coupon today. Or for information about specific applications write on your own letterhead. No obligation of course.

Synthane also manufactures

- caps for sizing bobbins
- rayon cake holders
- traverse slides
- redraw chucks
- hosiery sizing forms
- drier pole rests
- balloon separators
- redraw tubes
- finger inserts
- hosiery mending cups
- bobbin bushings
- verge plates
- macerated gears and gear blanks
- spindle bushings
- spindle adapter tubes
- redraw caps for nylon shipping pins
- hosiery carrying boards
- hosiery examining forms
- skein reel tube-bars

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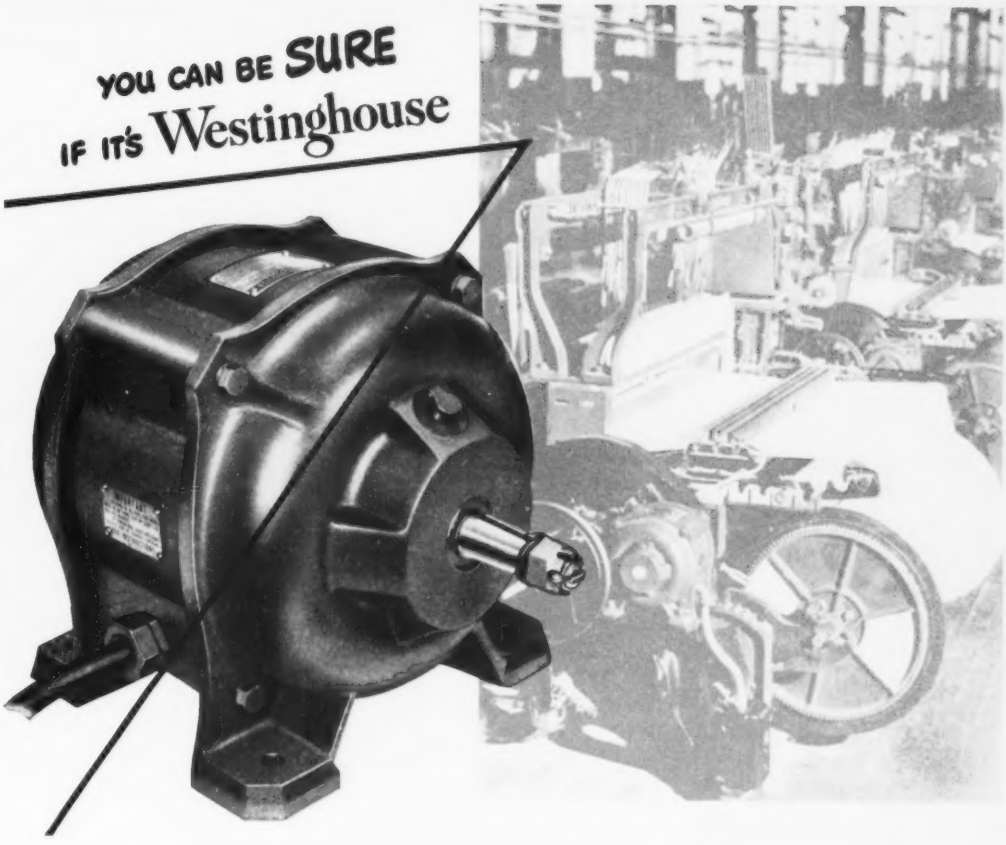

Westinghouse Loom Motors Are *Performance Proved*

Forty years' experience, working hand in hand with the textile industry, has shown that textile looms require motors of specialized design. So, Westinghouse, in co-operation with loom manufacturers, developed a loom motor to meet the extraordinarily severe demands made on such a motor.

The superior performance of many thousands of Westinghouse Loom Motors has proved that they have all the features needed to assure maximum output from modern speed looms, with a minimum of energy from the line.

When buying new looms, be sure to specify Westinghouse Loom Motors for your protection. If you are using motors not specially designed for loom operation, you will find it will pay you to replace them with Westinghouse Loom Motors which fit any loom, new or old.

Get the facts on loom motors by asking for our new bulletin, B-3778. Address your inquiry to one of our branch offices or to Westinghouse Electric Corp., Box 868, Pittsburgh 30, Penna.

J-21491

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PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

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finely made boards...for finely made hosiery

Never underestimate the importance of the boards (or forms) on your boarding and preboarding equipment. The *quality* of work produced on a boarding machine is in direct relation to the *quality of the boards*. The finest results can be obtained only on the *most carefully made boards*. That is why Proctor & Schwartz take such care in making the boards for Proctor boarding and preboarding equipment. Only the finest material obtainable is used and this is precision machined to give the boards the shape set by your pattern. Finally the boards are PROCTORIZED—a specially developed process which imparts a hard, mirror-like smoothness to the boards to assure you the utmost in fine finishing. That is why you owe it to yourself to rely on Proctor equipment complete with "Proctorized" boards always.

Much of Proctor drying equipment and textile machinery is covered in full or in part by patents or patents pending.

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solve full fashioned problems, too

The records of Alsimag Thread Guides in other textile applications resulted in the adoption of Alsimag guides by full fashioned hosiery manufacturers.

Monofilaments accented guide problems in full fashioned mills. Alert production men found the answer in Alsimag Thread Guides.

Mill after mill adopted Alsimag guides for more and more uses. Here are the reasons:

EXTREMELY LONG LIFE. Alsimag guides are hard. Alsimag 192 and 193 are 8 on Mohs' scale. Alsimag 491 is 9. The result is extremely long life even under high speeds and tensions.

HOMOGENIETY. Alsimag guides are the same all the way through. There is no surface "skin" to wear through. Gradual wear simply reveals new surfaces of the same character. Thus there is no point of sudden failure, no losses due to chafed yarn from undetected guide failure.

SUSTAINED, HIGH SPEED PRODUCTION. Alsimag guides permit full speed production—in some instances have permitted dramatic increases in speeds. Since Alsimag guides last so long they seldom have to be changed. Their strength and uniformity facilitate changes, reduce down time.

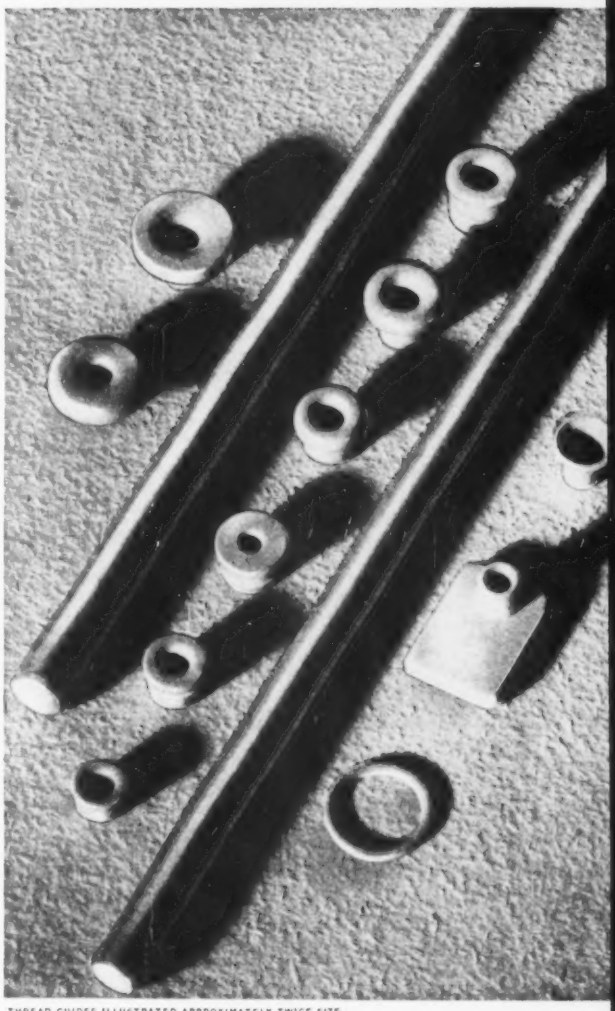
CONTROLLED FINISHES. Alsimag guides are available in mat, smooth or highly polished finishes. This aids in the control of tensions.

UNIFORMITY. Alsimag guides show little if any variation in size or characteristics from one guide to the next, from one lot to the other.

CUSTOM MADE. Alsimag guides are custom made for the specific application. Thus you fit the guide to the conditions of use instead of adjusting the use to the limitations of the guide.

SAMPLES. Standard test rods and tubes furnished free. Custom made samples at reasonable cost.

LET YOUR OWN RECORDS TELL YOU. We recommend tests of Alsimag guides in your plant. Let your own records establish the superior performance and lower cost of Alsimag guides. We will be glad to cooperate in developing the most satisfactory guide for your specific requirements.



THREAD GUIDES ILLUSTRATED APPROXIMATELY TWICE SIZE

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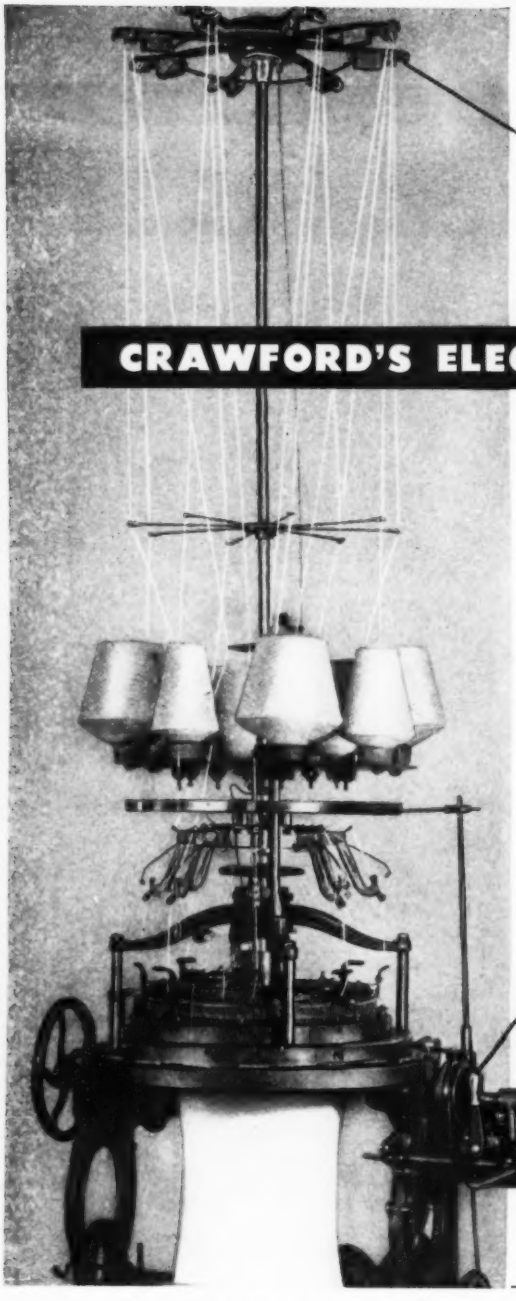

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VISIT OUR BOOTH AT THE KNITTING ARTS SHOW CONVENTION HALL, ATLANTIC CITY, APRIL 25-29

BOOTHS 254-55

. . . And see . . . in actual operation . . . the unit that has proved so valuable a time-saver and money-saver to the textile industry. But that isn't all you'll see at our Booth! We will also have for your inspection

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514 West Fifth St.
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PENNA. REPRESENTATIVE
JACK FORSTADT
623 Drexel Building
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Tel.: BELL: Lombard 5663
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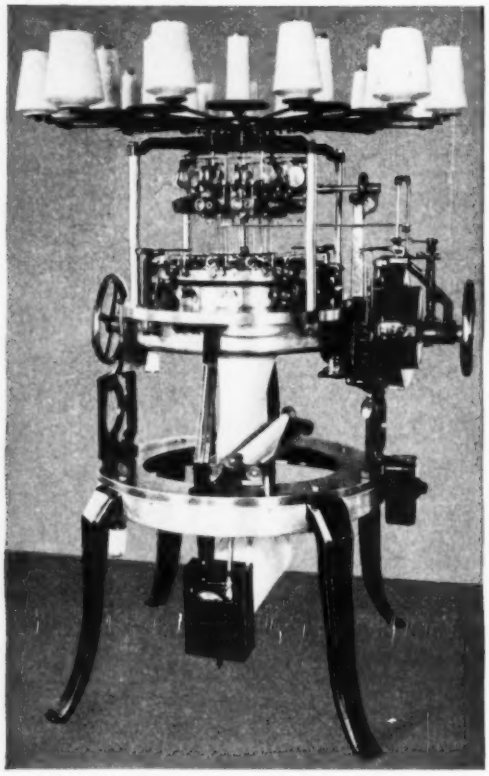
Call the Shell Lubrication Engineer for more information. He will be glad to tell you all about Shell Textile Processing Oils, and Shell Textile Machine Lubricants of all kinds.

SHELL OIL COMPANY, INCORPORATED
50 W. 50th St., New York 20, New York
100 Bush St., San Francisco 6, Calif.

SHELL

SHELL TEXTILE OILS

WILDMAN



SPRING NEEDLE KNITTING MACHINE

WILDMAN MFG. CO. • NORRISTOWN, PA.

VERY FINE

Gauge!

If you are interested in very fine gauge fabrics the spring needle machine is your answer.

GREATER

Volume!

than you ever thought possible in such a fine gauge machine. This is due to the many mechanical advantages, most of them exclusive Wildman features.

BETTER

Styling!

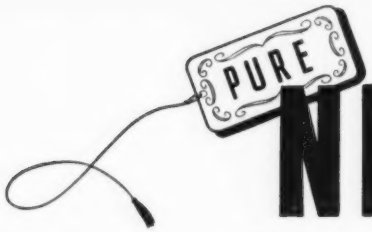
It offers better styling in the high quality fabrics.

FINER

Quality!

as this machine feeds yarn under such even tension that the uniformity of fabric is a natural result. Many other features we'd like to tell you about.

HERE'S A TYPICAL TEST
ONE OF 486
THAT WESTINGHOUSE FLUORESCENT LAMPS PASS
A phosphor crystal functions at top efficiency in a fluorescent lamp when its atoms are united in a definite pattern. Here a Westinghouse scientist tests mixtures of new phosphors in the Research Laboratory at Bloomfield, New Jersey.
That's Why Westinghouse Fluorescent Lamps
WORK SO WELL
BURN SO BRIGHT
LAST SO LONG
WESTINGHOUSE
YOU CAN BE SURE...IF IT'S
Westinghouse
THE NAME YOU KNOW IN Lamps



NICKEL

Sheet, Strip, Rod, Wire, Tubing, Clad-steel, Castings.

Its practical cost astonishes users almost as much as its distinctive characteristics

CHEMICAL COMPOSITION

The nominal composition of commercially pure wrought Nickel is:

Nickel*	99.4%
Copper	0.1
Iron	0.15
Manganese	0.2
Silicon	0.05
Carbon	0.1

**Including cobalt*

PHYSICAL CONSTANTS

Specific Gravity	8.89
Density, lb. per cu. in.	0.321
Melting Point	2615-2635°F. / 1435-1445°C.
Specific Heat at (80-212°F.)	0.130
Heat Expansion Coefficient at (80-212°F.), per °F.	0.0000072
Thermal Conductivity at (80-212°F.), Btu/sq. ft./hr./°F./in.	420
Electrical Resistivity at 32°F., ohms/cir. mil. ft.	63
Temperature Coefficient of Electrical Resistivity per °F.	0.0022-0.0028
Modulus of Elasticity in tension, psi	30,000,000
in torsion, psi	11,000,000
Poisson's Ratio	0.31

MECHANICAL PROPERTIES

The following figures for Standard Cold Rolled Sheet are typical, though the figures will vary for different forms and tempers.

Tensile Strength	55,000-80,000 psi
Yield Strength (2% offset)	15,000-45,000 psi
Elongation in 2 in.	50-35%
Rockwell B Hardness	40-70

AVAILABLE FORMS

Wire, Bar, Plate, Pipe
Rod, Angles, Sheet, Strip
Seamless and Welded Tubing
Sand and Precision Castings
Clad-Steel Plate and Strip Welding Rods

It is a strange and interesting metal, Pure Nickel. A kin of both the base metals and the precious metals. Among all the elements, no other metal possesses its unique combination of so many different and uncommon properties.

- It is highly resistant to corrosives that destroy many other metals—alkalies, many acids, salts, organic compounds, fumes.
- It has mechanical properties like those of structural steel.
- Yet it is so ductile that it can be worked into the most intricate and delicate shapes that are practical in metal.
- It protects the purity of sensitive foods, beverages and pharmaceuticals against contamination.
- It often provides a faster rate of heat transfer than metals with equal heat conductivity.
- Its special electronic properties make it a standard metal for electronic uses.
- It offers rare electrical and magnetostrictive characteristics that often give theoretical ideas a birth of practical value.
- It can be exposed to temperatures ranging into yellow heat and even hotter in the absence of sulphur.
- At sub-zero temperatures its strength increases without change in ductility and toughness.
- It is a standard metal for the cladding of steel, and as a base for gold, palladium and silver-clad products.

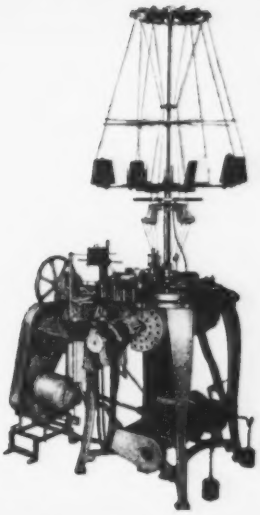
And one of the most valuable of all its features is the fact that Pure Nickel is a practical metal at a practical price.

Does it stimulate an idea of how you may find an easy answer to a difficult problem?

Our technical bulletin "Engineering Properties of Nickel" gives the important facts you want. It's yours for the asking.

The International Nickel Company, Inc.
67 Wall Street, New York 5, N.Y.

Leighton



CIRCULAR LATCH NEEDLE KNITTING MACHINES

Leighton Machines in various models are especially adapted for the

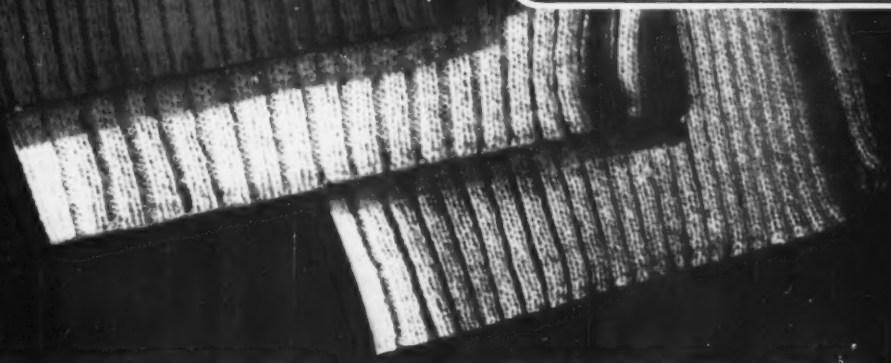
SPORTSWEAR TRADE

You are invited to visit the

LEIGHTON BOOTH No. 389

at the

KNITTING SHOW ATLANTIC CITY

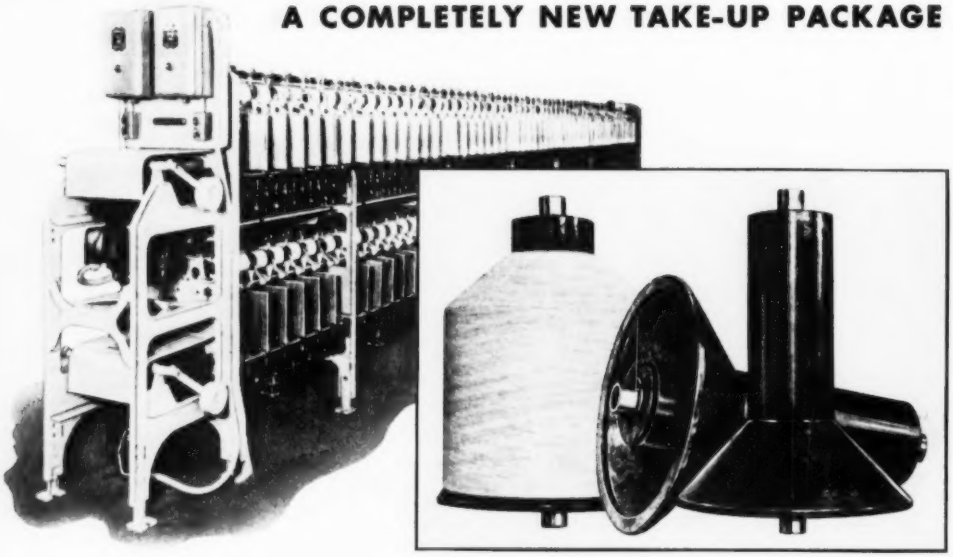


LEIGHTON MACHINE CO.

MANCHESTER, N. H.

Introducing THE Fletcher "KING SPOOL" Twister

A COMPLETELY NEW TAKE-UP PACKAGE



ASSURES MORE PROFITS FOR THROWSTERS

10 REASONS WHY YOU'LL WANT THE "KING-SPOOL" TWISTER

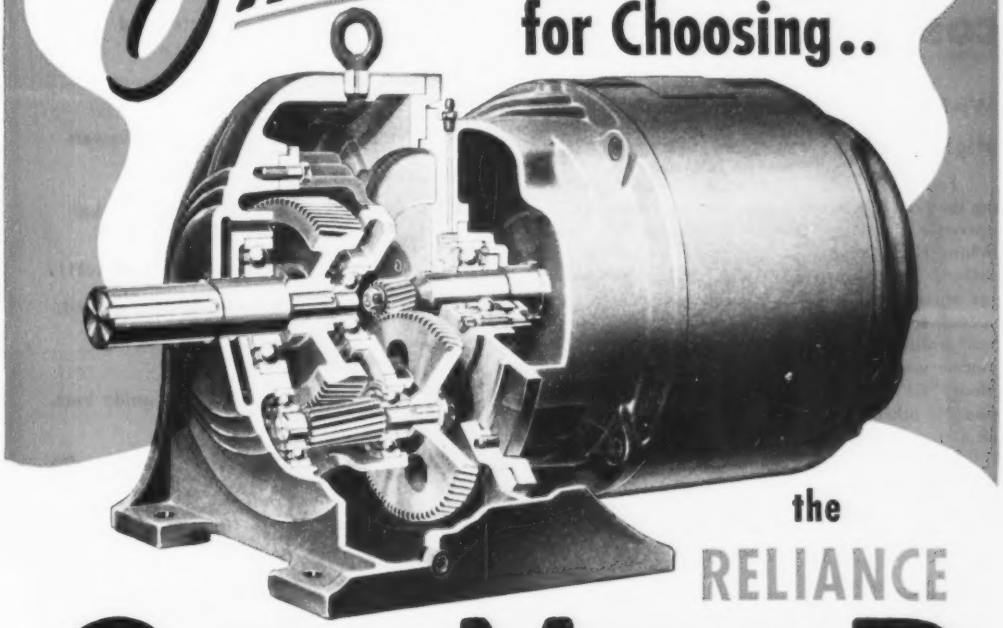
1. "King-Spool" provides ALL the advantages of the headless take-up package and eliminates the disadvantages of both headless and regular double-headed take-up bobbins.
2. "King-Spool" is more versatile! High as well as low twist yarns are handled with equally high efficiency.
3. "King-Spool" uses Overend Delivery – No Sloughing Off!
4. "King-Spool" provides for "tail" used in magazining.
5. "King-Spool" permits easier, more thorough steaming.
6. Fast Traverse! Yarn doesn't lap over or fly off open end. Underwinds impossible.
7. Automatic Bobbin Lifter! If end breaks or bobbin is full, the "King-Spool" automatically lifts from cork roll.
8. "Oilwell" Spindles—a year's supply of cool, clean oil—better lubrication at less cost.
9. "King-Spools" can be had with either molded plastic or expendable paper bases. Available in several sizes.
10. The "King-Spool" Twister is the newest product of Fletcher Works, builders of fine textile machinery since 1850.

SEND FOR FURTHER INFORMATION TODAY!

FLETCHER WORKS
223 GLENWOOD AVE PHILADELPHIA 40, PA. ESTABLISHED - 1850

SEE THE "KING-SPOOL" TWISTER AT THE KNITTING ARTS EXHIBITION, ATLANTIC CITY, APRIL 25-29, 1949

6 INSIDE REASONS for Choosing..



the RELIANCE

GEARMOTOR

1. Helical, wear-hardened gears cut from alloy steel forgings and shaved before hardening for correct eccentricity and helical angle and bright, smooth surfaces—factors contributing to quiet operation and longer life.
2. Gear arrangement in simple train minimizes number of moving parts—promotes quietness.
3. Pinion and gear supported and spaced to reduce deflection—permits high load-carrying capacity.
4. Splash system with large oil reservoir assures constant and thorough lubrication of all parts.
5. Anti-friction bearing construction throughout.
6. Reliance *Precision-Built* Motors provide the maximum in dependable and economical power. Types that may be had with GearMotoR are described in GearMotoR Bulletin C-404. Ask also for bulletins describing Reliance *Precision-Built* A-c. Motors—engineered for every power requirement.

Sales Representatives in Principal Cities

RELIANCE ELECTRIC AND ENGINEERING CO.

1086 IVANHOE ROAD • CLEVELAND 10, OHIO

"Motor-Drive is More Than Power"

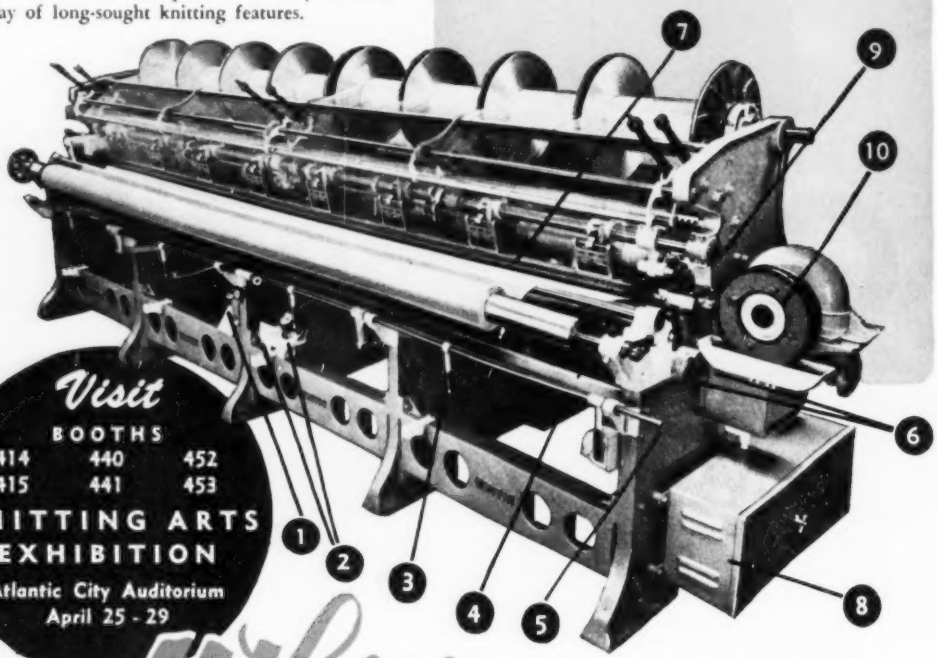
PRODUCTION *Up*
QUALITY *Up*
COSTS *Down*

With the NEW WHITIN Model "C2" High-Speed Tricot Knitting Machine

Faster production, better quality and lower costs are the principal factors in the formula for profitable operation in today's competitive market. The new Whitin High Speed Tricot Knitting Machine actually delivers a 30% increase in the number of courses per minute over previous models. Designed to knit viscose, acetate, nylon, silk and cotton fabrics up to 168" widths in gauges of 14, 28 and 32, it will accommodate warp spools up to 21" in diameter. See the Model "C2" in operation at the Knitting Arts Exhibition. No other machine in production today has such an array of long-sought knitting features.

See these FEATURES *at the Show*

1. Bijur automatic lubrication.
2. Center mounted tachometer and rack counter.
3. Electrical inching device eliminates hand wheels.
4. Large diameter bakelite cam followers.
5. Quick stop control.
6. New precision-bored cam and rocker shaft bearings.
7. Butted needle bars (optional equipment).
8. New needle-in-down-position stop unit.
9. Both rocker and cam shaft bearings are interchangeable.
10. Pattern wheels aligned with guide bars.



Visit
BOOTHS
414 440 452
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KNITTING ARTS EXHIBITION
Atlantic City Auditorium
April 25 - 29

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS
CHARLOTTE, N. C. • ATLANTA, GA.

An Invitation to the Knitting Trade

The industry's leading manufacturers of knitting, dyeing and drying machinery, mill supplies, yarns and allied products exhibiting their machines, processes, new products and mechanical features—

Invite you to attend

The 39th

KNITTING ARTS EXHIBITION

April 25 thru 29, 1949

ATLANTIC CITY AUDITORIUM, ATLANTIC CITY, N. J.

Under the Auspices of

National Association of Hosiery Manufacturers

THE ATLANTIC CITY AUDITORIUM WILL BE TRANSFORMED INTO THE LARGEST KNITTING MILL EVER PUT IN OPERATION. Mill officials, company executives, purchasing agents, sales managers and key men in all branches and departments of the trade should plan to attend and become familiar with the latest equipment, devices and improved methods shown by over three hundred makers of equipment and supplies used by the knitting industries, whose products will be shown or represented at the Knitting Arts Exhibition.

PLAN TO ATTEND . . . .

ATLANTIC CITY PROVIDES EXCELLENT HOTEL ACCOMMODATIONS—AT A WIDE RANGE OF RATES—ATTRACTIONS FOR RELAXATION AND ENTERTAINMENT

Tickets may be secured free from exhibitors or from the management of the Knitting Arts Exhibition.

ALBERT C. RAU, *Manager*

929 PARK SQUARE BUILDING **BOSTON, MASS.**

REDUCE YOUR LINT FIRE LOSSES...

WITH

THE MASTER OF FLAME
ANSUL*
REG. U.S. PAT. OFF.
FIRE EXTINGUISHING EQUIPMENT

4

DRY CHEMICAL

Listed and Approved by Underwriters' Laboratories and Factory Mutual Laboratories.

FIRE EXTINGUISHERS

MORE EFFECTIVE • MORE DEPENDABLE MORE ECONOMICAL FIRE PROTECTION

The Ansul 4 Extinguisher instantly smothers lint fires and protects unburned lint with a harmless, fire-resisting layer of Ansul Plus-Fifty Dry Chemical.

Ansul Dry Chemical is non-corrosive, non-abrasive and IT IS DRY. A speedy put-out with an Ansul 4 Fire Extinguisher eliminates costly shutdowns for repair of corrosion damage or for clean-up after sprinklers operate.

This small, compact extinguisher is particularly adapted for protecting many lint fire hazards common to the textile industry . . . cards, twisters, looms, etc.

Many mills, equipped with Ansul Dry Chemical Fire Extinguishers, have saved thousands of dollars by stopping lint fires FASTER without damage to delicate machinery or to the product manufactured.

For picker rooms, opener rooms and other locations where large masses of cotton are handled, the larger capacity Ansul 20 and Ansul 30 Dry Chemical Fire Extinguishers are recommended.

All Ansul Dry Chemical Fire Extinguishers are approved for use on fires involving live electrical equipment.

Ask for your copy of File No. 214. You will receive factual data on how Ansul Dry Chemical Fire Extinguishers will reduce fire losses in your mill.

Model 20 Model 30

ANSUL CHEMICAL COMPANY
FIRE EXTINGUISHER DIVISION, MARINETTE, WISCONSIN
DISTRIBUTORS IN ALL PRINCIPAL CITIES

Round Table

(Continued)

(Continued from page 172)

hidden charges also. When an operator is removed from his regular task and replaced by another man who is not experienced, the job will suffer either in volume or in quality. If the job is on piece rate, some mill men may argue that the rate is still the same regardless of the operator doing the job. But, the large and important overhead costs are not based upon piece work but rather upon the gross volume and quality produced by the department. The chances are that both will suffer when the regular man is off the job. That additional overhead is a part of the cost.

The overseer's job today consists not only of the responsibility to hold production at a maximum but also of a large number of additional tasks. His ability to get along with people, long considered as a desirable qualification, is now a necessity. With the entrance of unions into the economic picture, personnel work has become more vital; and the overseer must be trained to handle his portion of the personnel load. The same applies to safety work. While top management is responsible for the maintenance of safety standards, the overseer must be prepared to lead his employees in meeting and exceeding these standards.

The claim is often made that the efficient department is a safe one. It is worth reconsidering in the light of recent textile trends. To reach the highest peak of production, every machine must be in good working order as a result of scheduled maintenance. This would reduce the need for operators' getting too close to moving parts to effect minor repairs, etc., thus reducing the overall accident-exposure hours. All passageways should be clear and clean, thus reducing exposure to bumps, falls, and scrapes. Help should be available when heavy articles are moved, and this means fewer strains and hernias. Attention to these details will help the average overseer prove the theory that safety is economical. *(R-466)* Greenville, S. C.

Traveler-Wire Trouble

We are having trouble with the shape of the wire we are using in the travelers on our vetrical rings. The bend at the area through which the yarn runs seems to have sharp corners that cut the running yarn. I wonder if other readers of Round Table have had this problem and could help me? *(R-471)*

WE ENGINEER STEEL CYLINDERS TO YOUR . . .

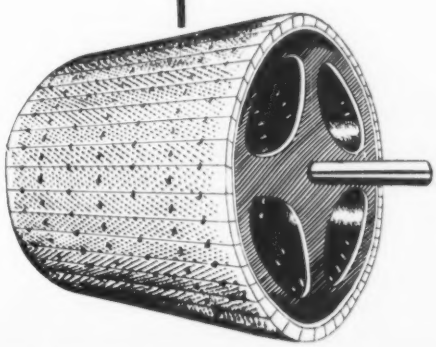
EXACT REQUIREMENTS

Here you see a steel cylinder, made to a customer's requirements, engineered *to do* the job!

You are likely familiar with Crabb pins and lags. Now, in offering you quality steel cylinders, we are able to meet any size range request from 3" to 63" in diameter . . . any length from 10" to 63" long . . . open or closed ends . . . dynamically balanced, if required.

Other features constructed of steel throughout . . . smooth operation . . . and sealed-in at ends to prevent lint from accumulating and throwing the cylinder off balance.

WE INVITE YOU TO WRITE US TODAY FOR FULL DETAILS. YOU WILL REALIZE SAVINGS AND GET QUALITY RESULTS FROM THESE STEEL CYLINDERS.



William Crabb & Company

301 THIRD AVENUE
NEWARK 7, N. J.

For Dyeing

Spun Rayon Yarns

You Can Rely on

GLOBE

Because the end uses of spun rayon yarns are so nearly the same as those of cotton yarns, Globe was among the first to develop and use efficient methods for dyeing them.

By experience and equipment Globe is able to give you the best in spun rayon, spun nylon, and other synthetic yarn dyeing.

An experienced Globe representative will be glad to discuss your yarn dyeing problems with you.

See us at Booths 75 and 76 at the Knitting Arts Exhibition in Atlantic City, April 25th to 29th.

1865 — 1949

Globe Dye Works Co.

We do package dyeing on tubes, skein and warp dyeing, warp mercerizing, and sizing.

Yarns we process include cotton, rayon, spun rayon, worsted, nylon, spun nylon, blend and novelty yarns.

4500 Worth Street, Philadelphia 24, Pa.

Questions AND Answers

Changing Needle Gage Is an Overhauling Job

Technical Editor:

Now and then we have to change the gage of some of our spring-needle knitting machines, and there is some disagreement as to the best procedure for doing it. We'd appreciate an opinion from you on the best method to use on trick-top machines. (9290)

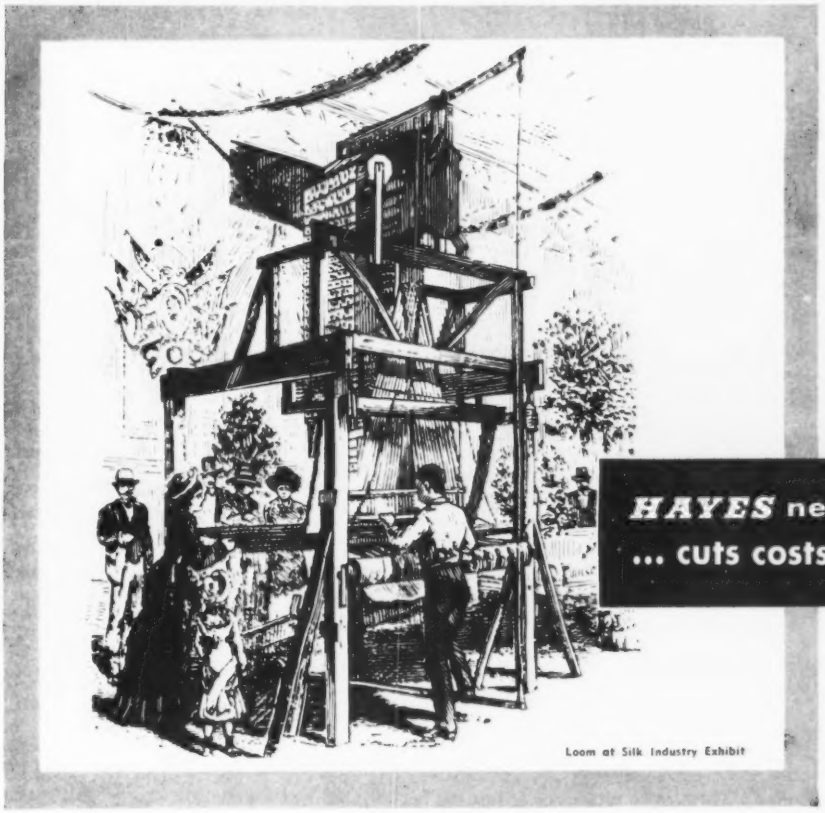
Changing the gage or number of needles on a spring-needle knitting machine of the trick-top type requires the removal and eventual replacement of quite a few parts. If only the number of needles is to be changed or the same feed set-up is to be used with a new gage, as few parts should be disturbed as possible.

The first step in making the change is to press off the cloth and roll it up in the take-up, where it remains ready to be placed back on after the change is completed. The spreader arms are then lowered out of the take-up rods, and the spreader shaft is removed from the base. The take-up is taken out of action by depressing the shipper knob.

If the same burrs are to be used in the new set-up, they are removed and kept in proper order so that they may be replaced on the same feeds. Cloth pushdowns are handled the same way. Needle plates come off, and needles out.

The grooved top plate should be removed by two persons. After the set-screws are loosened, place heavy cloth strips under the burr brackets to provide slings for pulling the plate up and off. The top plate usually does not yield to a straight upward pull and must be "walked" off by being turned back and forth while it is pulled upward.

The removal of the grooved top plate clears the way for the removal of the trick top except for any outside feed parts that may interfere. Usually, swinging the brackets of one feed out of the way will permit the trick top to clear. It is wise to loosen the trick top and make a try before disturbing



Loom at Silk Industry Exhibit

HAYES new way ... cuts costs TODAY

MODERN LIGHT METAL BEAMS SHARPLY LOWER COSTS

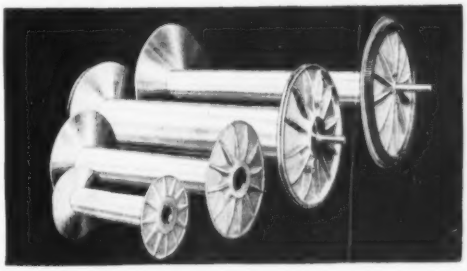
In the 1880's New York was thrilled by the Silk Industry Exhibition of the most modern equipment that meant better, lower-cost fabrics. Yet a mill operating with such looms today is hopelessly lost in the competitive business fight.

Hayes Light Metal beams are a modern advance in production methods that give a competitive edge . . . by appreciably lowering production costs.

How? In handling, because Hayes aluminum and magnesium beams weigh less than half as much as conventional beams. Shipping expense is substantially lowered . . . manpower productivity is increased . . . worker fatigue is lessened. In operation, superior balance assures smooth, vibration-free performance from true running shafts. Heads have minimum deflection under the heaviest loads contributing to better selvages. There are fewer rejects because the satin-smooth, polished head surfaces can't snag, chip, splinter or rust. Hayes Loom, Section and Tricot Beams fit all standard warpers and machines.

If there is a squeeze on your profits, look to Hayes Light Metal beams to widen the margin for you.

Write or wire for complete information on Loom Beams, Section Beams and Tricot Beams. Ask for Catalog 1-21.

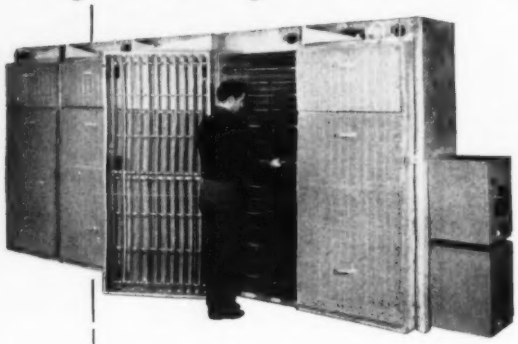


HAYES

INDUSTRIES, INC.

HOME OFFICE: Jackson, Michigan

You pay for Super-Clean Air only when you don't have it!



AAF Electro-Cell Precipitators soon pay for themselves by protecting equipment, product and personnel

DUST, soot and dirt can injure plant equipment—impair product quality—increase rejects and seconds. That's what costs you money! That's why you pay for super-clean air only when you don't have it.

Wise mill owners eliminate these impurities with AAF Electro-Cell Precipitators. With super-clean air, rejects go down—profits go up. Super-clean air soon pays for itself through increased protection and increased production.

AAF Electro-Cell is an electronic precipitator of exclusive design that removes dust and smoke particles of even tiny sub-micron size. Proven advantages of Electro-Cell:

★ Filtering efficiency up to 90% in the removal of dust, soot and smoke. Based upon The Bureau of Standards Discoloration Test Method.

★ Design featuring removable collector plates offers choice of maintenance methods—removing cells for servicing in special cleaning tank, manual washing and re-oiling in place or automatic cleaning in place without interruption of operation.

★ Sectional construction that reduces weight of parts—eliminates many electrical connections—protects wiring from dirt and water.

★ Full-height hinged or removable ionizers that minimize electrical losses—reduce ozone—simplify replacement of ionizing wires.

For complete information, get in touch with your nearest AAF representative or write for Bulletin No. 252. No obligation, of course.

AMERICAN AIR FILTER COMPANY INC.

304 Central Ave., Louisville 8, Ky.

In Canada: Darling Bros., Ltd., Montreal, P.Q.

AAF

AIR FILTERS

AND DUST CONTROL EQUIPMENT

Questions and Answers

(Continued)

it too much. If the top does not come off easily after the screws are removed, place needle-plate bolts in one or two screw holes and turn the top with a wrench to raise it so that it can be lifted off. If the trick top is to be stored for any length of time, a light coat of vaseline or oil is good insurance against rust.

Before the new top is installed, the needle slots should be closely inspected and thoroughly cleaned with a wire brush. If any of the slots are badly chipped or damaged in any other way, the top should not be used. If it is used under those conditions, it will be a source of trouble as long as it is on the machine.

Installation of the new top is accomplished by reversing the dismantling procedure. All parts should be looked over before they are installed, and bad parts discarded. Burrs should be rebladed if necessary.

With the trick top on the head, insert and adjust the new needles, place the feed parts in proper order and adjustment, and bring the cloth down from the take-up and jab it on. It is a good practice to tune up the machine on plain fabric, set the pattern, and recheck the machine.

All-Wool Slasher Cloth Made in Many Qualities

Technical Editor:

Can you give me any information as to the manufacture of all-wool slasher cloth used in cotton mills for covering slasher squeeze rolls? (9291)

All-wool slasher cloth is made in a number of different ways and qualities. A blend of reworked wool with a small amount of medium-grade new wool may be used. The wool is carded, spun, and woven on a loom of suitable width. A 2-up and 2-down twill is a good weave for this type of fabric.

The size of the yarn, picks per inch, ends per inch, and the amount of fulling will determine the weight and thickness of the fabric. The cloth is given a long run in the fulling mill, so that it has the appearance of a piece of felt. Some fabrics are also run through a napping machine to raise the nap and give the cloth a soft feel.

Filling Dried on Bias Causes Bow in Plaid

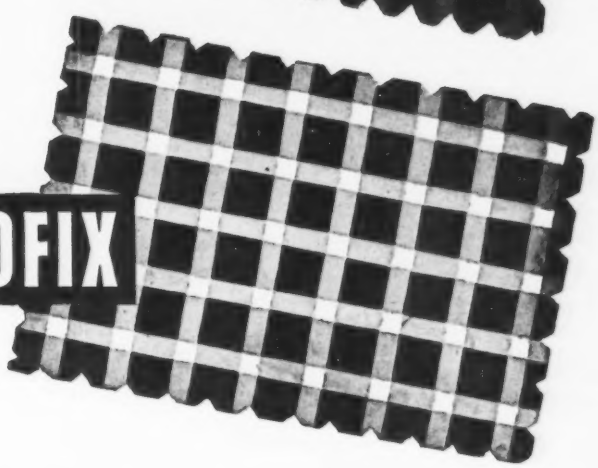
Technical Editor:

We are having trouble with the plaid in the inclosed flannel sample running crooked. Sometimes the plaid runs on a

STOP

COLOR BLEEDING

with *CULOFIX



Preserve crisp detail and contrast of prints by using time-tested Culofix as an after treatment.

Kill bleeding troubles no matter where they occur—in the finishing bath—batching up after dyeing—in cross dyeing, etc.

Improve water fastness of direct colors and impart a very desirable soft, full finish at the same time, thus eliminating an extra finishing operation. (Where no softening action is needed, Culofix L should be used.)

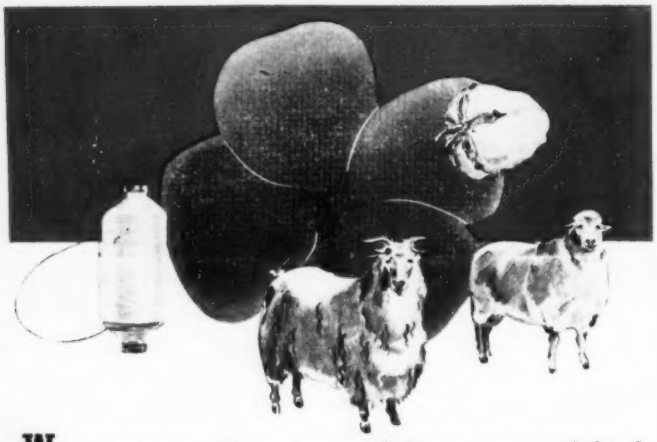
If fastness to water or prevention of color migration is essential to your direct color dyeings, write for Technical Service Bulletin #204-106.1. Our technical staff is at your service without obligation.

*REG. U.S. PAT. OFF.

Arkansas Co. INC.

Manufacturers of Industrial Chemicals for Over 40 Years

NEWARK, NEW JERSEY



Want to make something out of it !

The textile company that settles on the Texas Coast this year will find the *good fortune* that derives from good judgment and leadership. Here are all the textile industry's raw resources—28% of U. S. cotton; 21% of U. S. wool; 84% of U. S. mohair; a growing production of synthetics — *plus* the economy, efficiency and cleanliness of *natural gas*. The climate is mild, January through December; workers are plentiful, intelligent, cooperative.

You can make something out of that combination. You can make 1949 your year of opportunity. . .

. . . **Move your mill to the Texas Coast.**

Write, wire or telephone for a detailed survey, or special information. Or visit us this month while it's cold up North; it will be a real pleasure to show you around.

HOUSTON PIPE LINE CO.

Subsidiary of Houston Oil Company of Texas GEO. A. HILL, JR., President

Wholesalers of **Natural GAS**

Good fortune awaits textiles in Texas:

raw fibres • unsurpassed rail and water transportation • a fine, mild climate • excellent industrial relations • an abundant supply of economical efficient natural gas for fuel.

Questions and Answers

(Continued)

bias; sometimes it bows a little; and sometimes both conditions exist in the same piece.

We dry-clean our cloth, and it is then tacked for fulling. The tacking is removed before washing.

Can you account for this trouble? (9293)

The bow could be caused by crooked seams made when the pieces are sewed together. When the pieces are dried on the tenter, the crooked seams could cause the cloth to be distorted. The defect could also be caused by hand feeding one side of the cloth through the tenter faster than the other side.

The basic cause of distortion of the pattern, whether the distortion occurs in wet or dry finishing, is the bias manner in which the filling is dried. The solution, of course, would be to make certain that all seams are sewed with the filling absolutely straight, that feeding in all steps where open-width tension is used is equalized at each side, and that the filling goes through the tenter and subsequent dry processing in a straight condition.

Defective Embossing Causes Crepe Dye Breaks

Technical Editor:

We are inclosing a sample of a viscose-acetate crepe that we have redyed. This material is sent to us at the end of the season when the original colors are no longer salable, and we redye it to darker shades for the following season.

Our procedure in dyeing this crepe is as follows:

1. Wash in 2% soap and ½ of 1% synthetic detergent.
2. Dye in 2% solution, never allowing the temperature to go above 170° F.
3. Cold rinse.
4. Warm rinse with cationic softener.

You will note that the sample has breaks or crease marks in it. Can you tell us how we may prevent these breaks from forming or what should be done to remove them after they are in the material? (9294)

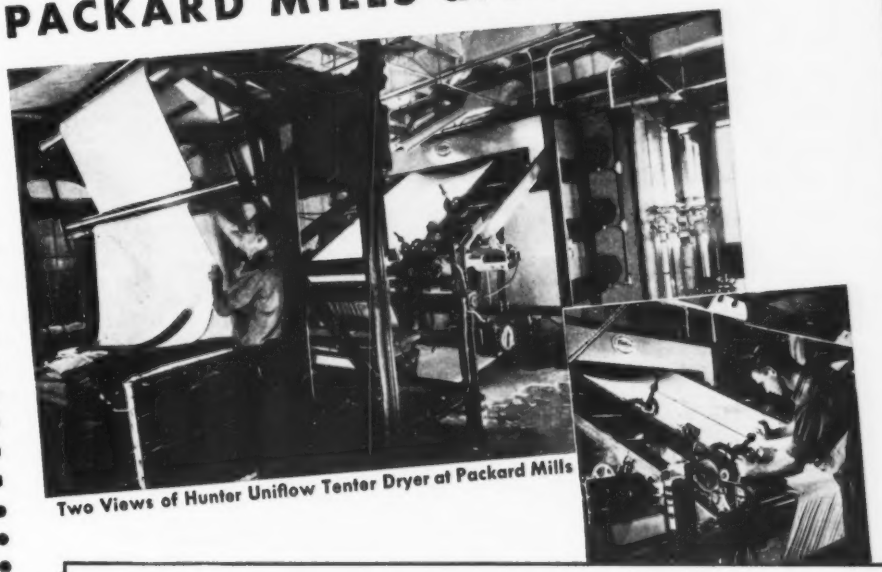
The breaks very likely were in the goods before they were redyed. Usually, such breaks occur in the initial wet processing or dyeing. Little can be done afterward to remove them.

The first step toward a solution would be to find out whether the cloth was embossed in the gray. If it was not embossed, the failure to emboss it very likely accounts for the cracks. Practically all rayon crepes require embossing to guard against cracking. While the procedure is not effective in every case, in most cases it is sufficiently effective to prevent cracking in the boil-off or during dyeing.

In the event that the fabric was

Memo on Modernization

PACKARD MILLS are MODERN



Two Views of Hunter Uniflow Tenter Dryer at Packard Mills

A New HUNTER Uniflow Tenter Dryer Speeds Their Finishing Operations

At Packard Mills they are getting better results, at less cost, through a never-ending modernization program. Like other leaders in the textile field, they specify Hunter for preparation and wet finishing equipment. Why? Because Hunter has the know-how gained by a century of experience — because Hunter equipment is the most modern available.

Packard's new Hunter Uniflow Tenter Dryer, for instance, affords drying times of 1.2 to 4 minutes, depending on the weight and construction of the fabric. Cloth is exposed to heat and air treatment but a fraction of the time usually required, with subsequent gain in handle and quality. The Uniflow requires only one man's operation.

One way to start your own modernization program is to get guaranteed production estimates on new equipment before spending a dime. A Hunter representative will be pleased to make such a guarantee after studying your requirements. Call on him.

Write today for your free copy of Bulletin UTD which gives complete details on the Hunter Uniflow Tenter Dryer.

BUILT BY HUNTER . . . IT'S DEPENDABLE

JAMES HUNTER MACHINE CO. Hunter NORTH ADAMS, MASS.

Hunter

JAMES HUNTER MACHINE CO., NORTH ADAMS, MASS. FOUNDED 1847.

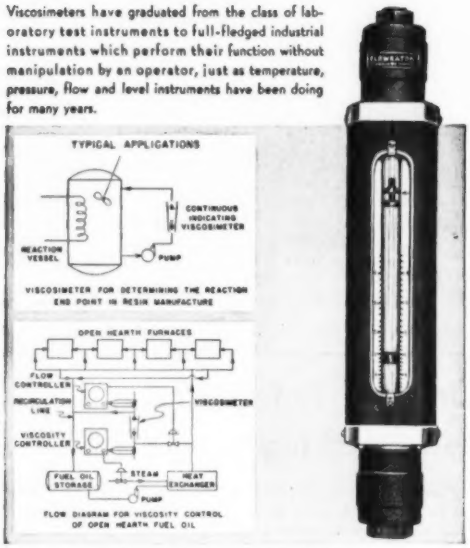
VISCOSITY MEASUREMENT

CONTINUOUSLY AUTOMATICALLY

(and with automatic control of the viscosity, if desired) RIGHT IN THE PIPE LINE, WITHOUT WITHDRAWAL OF FLUID SAMPLES, WITHOUT STOP-WATCH READINGS OF EFFLUX TIMES

NOW AN ACCOMPLISHED FACT

Viscosimeters have graduated from the class of laboratory test instruments to full-fledged industrial instruments which perform their function without manipulation by an operator, just as temperature, pressure, flow and level instruments have been doing for many years.



PRINCIPLE OF OPERATION

Continuous viscosimetry has been accomplished by utilizing one of the unique properties of the F & P FLOWRATOR meter (formerly rotameter):ability to make metering floats either viscosity sensitive or viscosity immune. Into one FLOWRATOR are placed two metering floats, the one so shaped that it is very viscosity sensitive, the other one with the patented F & P viscosity immune shape. When fluid flows upward through the tapered metering tube both floats will, of course, rise in the normal manner. However, the elevation of the one float will be relatively slight, since it is produced solely as a function of fluid flow rate. The other float elevation will be much greater since it is a function both of viscous drag and flow rate. The space increment thus created between the two floats is a direct measure of viscosity. By selecting any particular flow rate which will give a convenient elevation of the one float to serve as a reference line, the other float elevation may be marked as viscosity graduations in terms of centipoises, centistokes, S.S.U. or any other desired units. Viscosity measurement all the way from .0008 to 800,000 centipoises is now possible.

Write for catalog 88 giving much additional information. F&P VISCORATOR continuous viscosimeters have been thoroughly tested in trial installations for well over a year.

FISCHER & PORTER CO.

DEPT. 9P-8X HATBORO, PA.

FLOWRATOR

TRADEMARK

Questions AND Answers

(Continued)

embossed, careful study should be given to the materials and techniques used at this step. It is almost certain that some defect at this point is responsible for the undesirable result.

Washboard Shuttles Cause Weaving Trouble

Technical Editor:

We are having much trouble with washboard shuttles on our silk and rayon looms. We have tried lining the lay ends with a small amount of toe-in and also straight. We've noticed that the trouble is worse on warps of cupramonium rayon that have one S-twist end and one Z-twist end in a dent than on our sized warps with no twist.

We have 52-in. C&K dobby looms, 2x1, 142 fpm. Cloth is 48½ in. in the reed.

Can you account for our trouble and advise us how to prevent it?

Also, what should be the life of a shuttle, in loom hours, on this type of work? (Our shuttles are made of wood on the inside and fiber on the outside.) (9292)

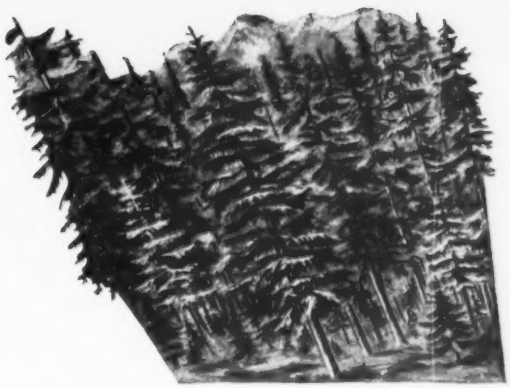
Keep pitch out of the reed lining on the 52-in. 2x1 loom operating at the slow speed of 142 ppm. Align reed flush with box-mouth plate. It is a fixing job to check reed alignment after new warps are started up; the reed should be as perfectly in line from the race to the top hanger as possible. However, a slight washboard back will gradually appear on the most carefully aligned reeds.

Inspect the alignment of the box with the box-mouth plate on the drop side. Occasionally, the box bead is worn thin and the groove may be slightly enlarged. On the weaves running only one shuttle, the outside box guide can be tapped tighter to prevent too much loose box movement. On a two-shuttle weave, a slight amount of looseness must be had; otherwise, boxes may jam on the change.

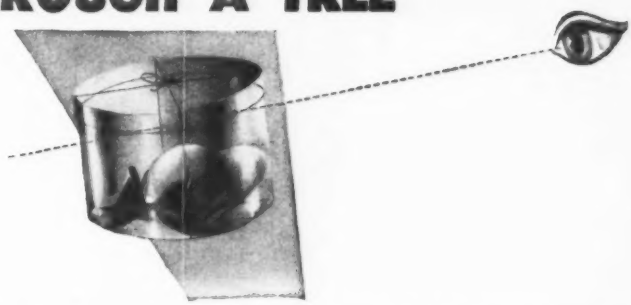
Quite often, washboard shuttles are caused by the looseness of the box, as the bead and groove wear allows the shuttle to strike either coming in or going out of the box according to the part that projects out of alignment. It may be necessary to install new boxes or enlarge the bead by welding and finishing to the desired thickness. Occasionally, the condition may be corrected by bending the front end of the box to come into line with the box mouth plate and reed.

Check the shuttle throw from the box side. If the spur is out of line with the picker, the slight difference will give a wobbly thrust to the shuttle across the race. As the shuttle bounces against the reed, the washboard effect is made worse.

Check both shuttles to the picker



YOU'RE LOOKING THROUGH A TREE



Many types of wearing apparel, drapes, and other textile products are made of yarns produced from highly purified wood cellulose.

Automobile and truck tires have longer life if they are made with viscose rayon cords, which are produced from wood cellulose.

There are other products made from purified wood cellulose—photographic film, vulcanized fiber, lacquers, to name a few.

The transparent material that protects this lady's hat started out as part of a tree. Cellulose acetate it's called—it is made from highly purified cellulose derived by chemically processing wood. You will find flowers as well as hats packed in this material, and a variety of toiletries and other articles where both product protection and eye-appeal are important.

Another familiar transparent material—cellophane—is used even more extensively for packaging purposes, particularly for foods. It, too, is made from highly purified wood cellulose.

That is why, when you inspect a product through a transparent wrapping, the chances are you are "looking through a tree."

Rayonier does not make cellulose acetate or cellophane. It is our job to convert trees into highly purified wood cellulose from which transparent packaging materials—and many other useful products—are made. We supply highly purified wood cellulose in a number of types, each developed to give best results in making the various end products for which it is used.

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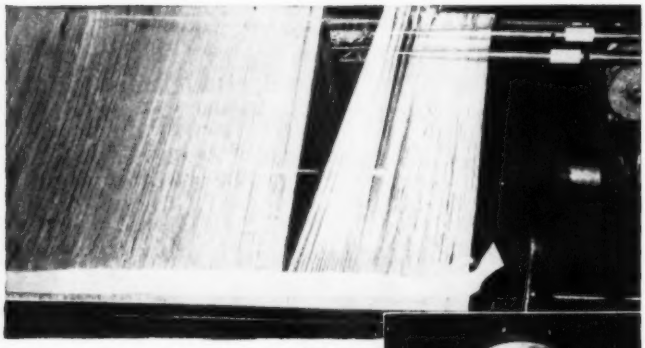

Gabardine warp ends held in place with "SCOTCH" Textile Tape No. 200 stay in perfect alignment as they are prepared for drawing into loom harnesses. Tape saves labor time on this leasing machine operation.

Ends of finished gabardine warp firmly held with "SCOTCH" Textile Tape No. 200. Use of tape avoids practice of knotting warp ends, having to cut them off—eliminates waste, gives easier handling.

Take a trip through your plant with one of our sales engineers. Have him point out the many spots in your operations where "SCOTCH" Textile Tapes can cut your costs, increase your output.

A letter or card today will bring you complete information on these tapes designed especially for the textile industry—or will bring our sales engineer, if you ask. No obligation, of course. Simply write Dept. TW4.

Quick Facts About "SCOTCH" Textile Tape No. 200

- FAST—goes on with finger-pressure, no special equipment needed.
- NEAT—will not injure any fabric, removes cleanly from all materials.
- STRONG—tough paper backing, sturdy pressure-sensitive adhesive make this tape ideal for many operations. No activation necessary . . . no moistening of any kind.
- ECONOMICAL—saves labor time, eliminates many former wastes.

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Questions and Answers

(Continued)

hole. Move to box front with the shuttle in place and check to see that the spur of the shuttle centers the hole. If the spur is off, the picker-rod stand must be moved the required distance. On the older-type 2x1 looms, the stand is not adjustable, and the rod must be bent at the front end to bring the picker hole and spur into matched positions.

Another reason for washboard shuttles is the position and shape of the box binder. With binders bent to the front too far off center, the shuttle is held too long and is given a wobbly thrust. Even on an incoming shuttle, the power required to drive the shuttle into the box with a tight binder bent front of center has a tendency to give a sudden thrust to the shuttle back against the cell wall, giving the washboard effect along the upper and lower section of the shuttle back.

The shuttle should leave binder tension about ¼ in. past the sweep. Thus, if sweep is 8 in., the binder should release full tension at 8¼ in. This distance, of course, is only an approximation for good loom running; it may not be so desirable on a wide weave that requires binder action to start after the shuttle has cleared the cloth to prevent smashes along the selvages.

As there are several types of the 52-in. looms, there are likewise several good fixing methods that may vary on different types of looms. If the loom is of the plain-box type with the loose leather picker on the plain or motor side and has wooden binders in back, cover the surface of the binders with leather. The leather permits a softer checking action on the shuttle and also permits less binder tension, which lessens washboard shuttles.

Keep protector-rod tension barely strong enough to insure protection on a slam-off. If tension is too strong, more pick power is necessary to throw the shuttle across, and more binder tension is required in checking this unnecessary power.

On the twist warps, shedding may be so wide that it permits the shuttle too much freedom. The shed should open to about ¼-in. clearance above the shuttle front wall when full.

The four-side fiber-wall shuttle gives long life; and on this loom, it will usually give better than 6,000 hr. of service. The twisted yarn lowers loom hours about 10%, as the front wall will wear faster. On all warp-outs, check the shuttles, clean the backs, and match them to size.

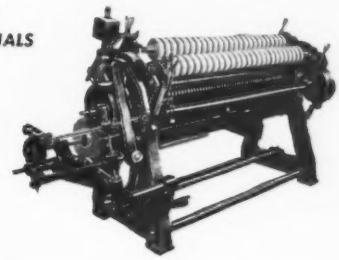
Check along the reed end, box mouth, and guide for red-fiber dust that may indicate coming trouble.

Camachines

. . . for men with ideas

With more than twenty different models for the textile industries to choose from, Camachines offer a practical answer to every slitting and roll-winding problem. Illustrated below are four typical Camachines for men with ideas about increased production, improved quality and lower costs . . .

TACKY MATERIALS

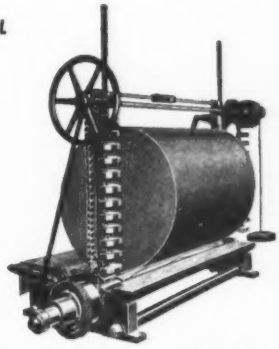


CAMACHINE 26-3A is especially designed for handling tacky or unevenly coated materials, such as adhesive tapes. Machine widths 26" to 56". Accommodates a 32" diameter mill roll. Rewinds rolls as narrow as ½", or up to 17¼" in diameter. Operates at speeds up to 400 fpm.

BIAS BINDING

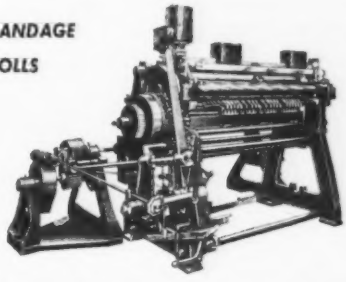
CAMACHINE 40-3L is the ideal machine for converting straight and bias binding fabrics (also specialty fabric) into strip in rolls. Machine widths 26" to 56". Accommodates material from roll, piece or fold. Rewinds rolls as narrow as ½", or up to 22" diameter. Speed up to 150 fpm from fold; higher from roll.

LOW MODEL WINDER



CAMACHINE 44-W low model winder operates in conjunction with processing machines as in bleacheries, fabric printing plants and bag factories. Available in machine widths from 32" to 82". Produces firm, uniformly rewound rolls up to 36" in diameter at speeds up to 1000 fpm.

BANDAGE ROLLS



CAMACHINE 40-4B, a semi-automatic machine for fast production of gauze bandage rolls. Machine widths 42" to 50". Accommodates 24" diameter mill roll. Rewinds rolls as narrow as ½", or up to 12" diameter. Machines come equipped with automatic stop for producing rolls of predetermined length.

Cameron Machine Company, 61 Poplar St., Brooklyn 2, N. Y.

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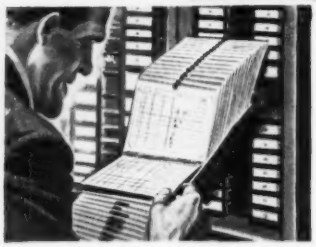

"WE GET THE MOST FROM EACH ACCOUNT—Competition never gets a chance to move in. Our Kardex Record reveals what scheduled calls have not been made, where sales are below potential. It even indicates the probable current needs of each account—a big help to our customers as well as ourselves.

"WE MAKE MORE CALLS—That Kardex Record of ours does just about everything but make a salesman's calls for him . . . and all with a minimum of clerical help. It automatically prepares his selling angles, helps him plan each day, gives him more free time for seeking new accounts, reselling others.

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Value of Recreation

(*Continued from page 107*)

to accommodate three ping-pong tables and several tables for checkers and chess. By removing all tables, comfortable space can be provided here for club meetings, committees, etc.

A porch opening off the lounge overlooks the swimming pool, the valley, and a wooded area beyond. There is ample space on the porch for table games.

The recreation building and the pool will be approached through an entrance drive and a large parking area.

The kitchen is planned with generous provision for the preparation of food for some 450 people. It opens into both the gymnasium and the club room for convenience in serving. The club room will conveniently seat 50 to 60 people, and this can be almost doubled by using the game room. Soundproof movable partitions are used between the two.

OUTDOOR FACILITIES. The outdoor facilities include a full-size softball diamond with bleachers, a children's playground area adjoining the wading pool, and a paved area on the north side of the building. This area, 70x90 ft., will be inclosed by an 8-ft. fence and lighted for evening use. It will be used for roller skating, basket-, hand-, and volley-ball games, deck and paddle tennis, badminton, shuffleboard, dancing, dramatics, song fests, vesper services, and other activities.

The entire project will provide means for a year-around recreation program running morning, afternoon, and evening throughout the year. Special programs can be set up for young children, 'teen-age groups, young married couples, mothers, fathers, foremen's clubs, and for older members of the community. Every employee of the various mills will have a place in the planned activities.

The center was developed as a means of making working and living conditions at Dover Mills as happy and enjoyable as possible. It is management's opinion that fun, play, entertainment, and participation in wholesome recreational activities for workers in off-time hours are hours gained on the job for continued top production. Constructive and educational programs minimize turnover and absenteeism, engender loyalty, and increase the pleasures of living for the employees and their families.

The project was made possible through the cooperation of J. R. Dover, Jr., president, C. I. Dover, secretary and treasurer, of Dover, Mills, and by the creation several

only WEST LASTINCOTE was chosen

TO COVER 750,000 SQUARE FEET OF FLOOR SPACE IN ROBBINS CLOTH MILLS 3 BIG PLANTS!

"CONCLUSIVELY BEST BY COMPETITIVE TEST" Because heavy textile traffic is *tough* on floors—the floor finish has to be even *tougher!* . . . So in experimenting with a floor finish for its maple floor in its new plant in Aberdeen, North Carolina—the Robbins Cloth Mills insisted first of all that it be greatly *wear-resistant*. Besides which it had to possess a hard, long-lasting lustre—prove easy to apply and maintain—and to accomplish the greatest possible coverage at minimum cost.

"Test panels" of a half-dozen competitive floor materials were taken and studied—*and only WEST LASTINCOTE made the grade on ALL vital counts!*

A convincing enough test for LASTINCOTE? Ordinarily, yes—but not for the company's other two plants! Each, in turn, tested LASTINCOTE separately . . . the result?

The total floor area of all three plants, comprising 750,000 square feet, is beautifully protected by three coats of WEST LASTINCOTE.

What LASTINCOTE is!

LASTINCOTE is a hard, brilliant finish particularly created for textile floors of every type. A clear sealer, it has extra penetration power—seeps deeper into every floor-pore to *build in* added resistance and durable beauty. Alkali soaps and other floor hazards won't affect it—nor will most acid solutions. Easily applied with a lambs-wool applicator, it adds trouble-free maintenance to extremely low-cost coverage.

WEST DISINFECTING Company

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BECAUSE:

1 **They don't bleed.** Their metal cores and nylon bristle can be washed clean after use. No color is retained to cause trouble later on.

2 **They save on dyestuffs.** They cannot absorb and hold dyestuffs.

3 **They far outlast all other furnisher brushes**—up to 10 times as long. The cores are practically indestructible. Nylon bristle does not soften when wet and wears down slowly.

CORES of cold drawn aluminum or steel. Cannot warp, sag, split, or get out of alignment.

NYLON BRISTLE is wound on the metal core with flat corrosion-resistant wire and sealed in place with a special solvent-proof plastic cement.

OTHER "METLKOR" CYLINDER BRUSHES USED BY THE TEXTILE INDUSTRY INCLUDE:

- Clothroom brushes for shears and brushing machines.
- Laying and Raising Brushes.
- Flock Brushes • Comber Brushes • Treadle Brushes • Dresser Lags • Darex Blanket Washer Brushes • Soaper Brushes

Write for illustrated catalog and full descriptions of Jenkins' brushes for all purposes.

M. W. JENKINS' SONS, INC.

Specialists in Manufacturing Industrial Brushes since 1877.

CEDAR GROVE ESSEX COUNTY NEW JERSEY

years ago of the Dover Foundation, through which it is being financed. The center was designed by Charles M. Graves, park and recreation engineer, and A. Thomas Bradbury, architect, both of Atlanta, Ga. Clayton Perreault, superintendent of the parks and recreation department of the city of Shelby, N. C., served as consultant on the project.

Berkshire Housing

(Continued from page 115)

and dining room is equipped with compact Pullman-type fixtures which include a 7-cu.-ft. Norge refrigerator, a two-faucet steel-cabinet sink, a four-burner gas range with oven, and ample steel wall cabinets.

There are five rooms and bath in the single-family dwellings—three bedrooms, 10 x 11 ft., with spacious clothes closets; a linen closet and storage space of 18 sq. ft.; the kitchen-dining room combination; and a 12½ x 17½-ft. living room. Attics are floored and provide about 250 sq. ft. of storage space. Large, stationary picture windows without sash divisions light every room. These are flanked by smaller casement-type windows that open on a swivel operated from inside by a hand crank.

Single houses cost $10,250 and the duplexes $17,000. Berkshire is offering them to skilled textile workers for $8,850 and $14,500 respectively, with a down payment of 17%. This amounts to $1,500 on a one-family house and $2,500 on a double. Monthly payments, which include interest at 4% and a substantial reduction of the principal, are $44.54 for the single and $72.72 for the duplex house. Mortgages are carried by the Berkshire company and run for 20 years. However, buyers may repay the mortgage loan at any time without penalty. In addition to the above advantages, the village of Albion is located in the Town of Lincoln, which, residents boast, has the lowest tax rate and the most return for their tax dollar of any place in Rhode Island.

Berkshire has received applications from many sections of the state and from people in many industries. However, the management is selective in the acceptance of applicants. To sell to families whose jobs are outside the operations of Berkshire's Albion plant would defeat the purpose of the venture. One application, however, is being considered favorably from a couple who are now in jewelery work but were former textile workers. They have two 'teen-age boys who are potential textile hands.

Another application that attests to the value of the houses is from a

for.....

LIGHT FASTNESS ON RESIN TREATED FABRIC

CHLORANTINE FAST:

YELLOW	RLSW
ORANGE	3GL
BROWN	6GLLU
SCARLET	BNLL
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VIOLET	2RLL
BLUE	7RLL
BLUE	BLL
BLUE	5GLL
BLUE	BCL
GREY	GRL

These . . .

maintain maximum light fastness after urea formaldehyde resin treatment . . . for stabilization and crush resistance.

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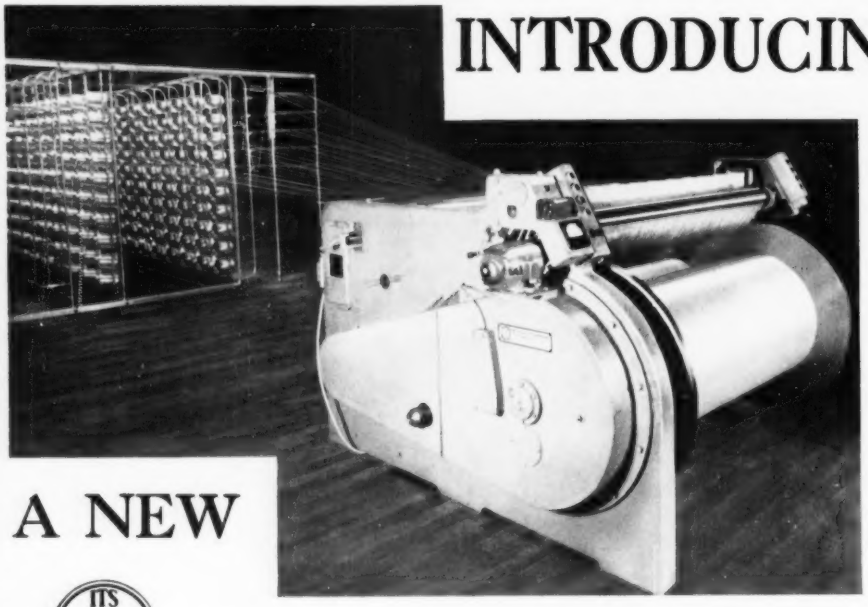
VAT DYES OF THE DOW CHEMICAL CO.



INTRODUCING

A NEW

ITS A SIPP EASTWOOD

HIGH SPEED WARPER

ELECTRONICALLY CONTROLLED

Here is a powerful new warper, so heavily constructed as to be practically vibrationless when in operation. It can run at yarn speeds of 150 and 900 yards per minute, and builds beams up to 36 inches in diameter, 54½ inches or wider between heads, AC-DC drive.

OUTSTANDING FEATURES INCLUDE:

1. Static eliminator.
2. Electric control of warp speed.
3. Electric indication of speed at all times.
4. Pushbutton controls throughout.
5. Motor mounted magnetic brake.
6. Magnetically operated beam brakes for auxiliary braking of the beam, measuring roll and pressure roll, and to hold the beam at a standstill.

A separate hydraulic system is provided for handling of beams in and out of the warper
Write for full description of this new warper.

SIPP-EASTWOOD CORPORATION

47 KEEN ST. PATERSON, NEW JERSEY

Domestic Representatives:
J. S. FALLOW & CO., NEW BEDFORD, MASS. S. FRED TOLL, 2128 Greene St., Charlotte, N. C.

carpenter who worked on the project. This man's wife is an employee at a textile mill in a nearby town. Another application is from a young couple who, because of adverse housing conditions at their present location, are eager to settle in a home of their own at Albion. The wife is a skilled cotton-mill worker, the husband an employee in a synthetics plant. Both agree that Albion Terrace is the answer to their plans for a home in a community near their work where they can enjoy the independence and pride of ownership.

It is neither the wish nor the intention of Berkshire Fine Spinning Associates to entice workers from other textile plants. Nevertheless, if the purchase of a home is profitable to both the workers and the management, then the deal will be consummated. The purchaser will have a sense of security, almost a promise of steady employment, for the future; and the management, as families grow, will be assured a source of labor-power.

Berkshire is displaying a positive faith in the security of its place in the textile industry and is conveying that assurance to those whom it employs as well as to those who wish to become associated with Berkshire. This new development does more than ease the congested housing conditions in the village of Albion; it does more than invite unemployed textile workers. It almost guarantees to all, labor and management alike, that Berkshire will operate in the future as it did in the past—steadily, harmoniously, and profitably.

Fiber Tests

(*Continued from page 119*)

showed that classified length was directly related to yarn strength, he would try to select bales of suitable fiber length to give the required yarn strength. From his past experience, he also knows in a general way that fiber fineness is associated with fiber length and that fiber strength bears some relation to fiber fineness.

The cotton classer might go a step further and note on the graph that mean or average fiber length is a most consistent fiber property in its effect on yarn strength. This tells him that wasty-appearing bales, even though they are of the required classified length, should be avoided because of their large proportion of short fiber and their low mean length. A high mean length generally assures a high uniformity ratio, and this cotton is more likely to be fully matured.

With this brief reasoning, the classer has tied in, directly or indirectly, classified length with these five other important fiber properties:

Doors
THAT SAVE DOLLARS!

Bank, Store or Office Building

Hospital and Institution

Hotel or Restaurant

Industrial Plant Communicating Doors

Stanley Door Controls written into the plans pay for themselves times over in almost any type industrial, commercial or institutional building you design.

Actuated by a photo-electric "eye", Magic Doors open instantly and automatically on approach, stay open till the passage is clear, then close quickly and silently.

Magic Doors speed up materials handling help increase production in mills and factories. Magic Doors make appreciable savings on heating and air conditioning costs. Magic Doors eliminate unpleasant crowding around entrances—improve service and build profitable good will in hotels, stores, restaurants and office buildings you design.

Stanley Door Controls, "Magic Doors", operate either swinging or sliding doors, or a combination of the two, and can be designed to suit practically any requirements of space or location. If you have not already done so, it will pay to investigate their full possibilities now. Mail this coupon for complete information today!

STANLEY
Reg. U.S. Pat. Off.
The Magic Door

HARDWARE • HAND TOOLS • ELECTRIC TOOLS • STEEL STRAPPING

The Stanley Works, Magic Door Division, 107 Lake St., New Britain, Conn.
Please send me full information on Stanley Magic Doors.

Name .....
Firm .....
Street ..... ☐ Check if you would like a representative to call.
City ..... State .....

HOW TO GIVE YOUR FLOORS A FUTURE

(Above) Dark oil-soaked floor maintained by scrubbing. (Right) Similar area, same dirt conditions, but TENNANT dry-cleaned.

An example of results you can get with the

TENNANT *System* OF FLOOR MAINTENANCE

To be SURE of bright, easy-to-clean floors in your mill—both now and for *years* to come—no other maintenance method is more effective than the TENNANT SYSTEM.

It not only reconditions dark, spongy, water-softened floors . . . it restores original brilliance . . . hardens, seals and *protects* against dirt and traffic . . . cuts cleaning costs.

KEEPS FLOORS BRIGHT by fast mechanized dry cleaning. Eliminates scrubbing.

MAKES FLOORS EASY TO CLEAN. Dirt cannot readily adhere to smooth-sealed floors. Wipes off easily.

CUTS MAINTENANCE COSTS by saving manhours. Floors clean up like magic and stay clean much longer than when scrubbed. Floors stay dry, hard, lustrous; reduces slip hazards.

G. H. TENNANT CO.
2586 North Second Street
Minneapolis 11, Minn.

Write today!
Get typical case histories, photos, and NEW bulletin "How to Get Better Results In Textile Floor Maintenance."

TENNANT FLOOR MAINTENANCE *System*

Established 1870

OFFICES IN PRINCIPAL CITIES

mean length, length uniformity, fiber fineness, fiber strength, and fiber maturity.

It is well to caution cotton men in the mill not to put too much unsupported dependence on classified length alone. Many bales of good classified length will show a low mean length. This is clearly indicated in the test figures from which this graph was plotted. One lot of 1 5/32-in. cotton showed a mean length of 1.00 in. and a uniformity ratio of 93, while another lot of 1 5/32-in. cotton gave a mean length of 0.76 in. and a uniformity ratio of 76.

Mean length will prove a better guide than classified length in maintaining uniform yarn strength. Some means should be provided for rapidly determining mean-length values of doubtful bales. If there are any low mean-length bales to be used, it is good practice to mix them in small quantities with bales of longer mean lengths.

The uniformity-ratio line in the lower values does not give the increased yarn strengths that might be expected. However, it recovers to a normal consistent increase in the higher uniformity values. The fiber-fineness line does not follow a definite pattern at the two extremes, but it does show a consistent increase in the center of the range as fiber fineness increases.

Increased fiber maturity has little effect on yarn strength as shown on the graph except at the low-end values. Fiber strength increases yarn strength at the lower values, retains the same yarn strength through the center of graph, and then shows a large increase in yarn strength at the higher values.

The yarn-strength values shown on the graph by plotting individual average fiber-property values are greatly different from those obtained by the joint effect of different combinations of varying property values in actual test data. There are so many different combinations possible that it is impracticable to determine from graphs or other data just what the resultant yarn strength will be from any given combination of fiber property values.

From many actual tests, complex statistical formulas have been calculated that show the correlation of certain property factors in combination with other property factors. This is the only way in which the probable effect of any combination of factors can be approximated. Actual spinning tests are usually needed to corroborate the results of these calculations.

Skilled, experienced classers appear to have an intuitive ability in detecting and appraising fiber-property values. With the exception of classified length, none of these appraisals are

for the smoothest performance they choose **aerotex*** **softener H**

TEXTRON AND LAROS – two of the leading slip manufacturers turn to **aerotex softener H** to get the softest, smoothest finish on their lingerie fabrics. **aerotex softener H** gives a luxurious handle to fabrics of rayon and other synthetics, to wool, to cotton, and to silk. Even in the case of Vinylidene Chloride plastic yarns, it can easily be applied from a bath at the looms or on a warp beamer! And – **aerotex softener H** cuts down static electricity, your big plant nuisance. It stops shocks and the disturbance of fabric floating.

Technical facts about aerotex softener H

- disperses readily in water
- can be used in anti-wrinkle formulae
- has no tendency to discolor white goods
- eliminates accidental moire on taffeta
- does not affect shrinkage or stretch control of rayons
- has no tendency to develop odors
- reduces fuzziness of staple yarns, eliminating snags and breaks for more efficient back winding
- dermatitis patch-tests indicate full safety

For a super smooth performance where softness counts use **aerotex softener H**

aerotex* softener H

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TEXTILE RESIN DEPARTMENT

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Tel. Bound Brook 9-2000

30 ROCKEFELLER PLAZA, N. Y. 20, N. Y.
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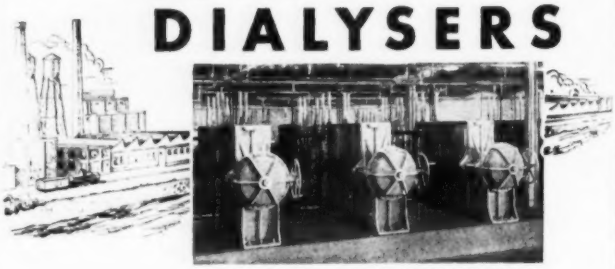
WEBCELL CONTINUOUS DIALYSERS



TYPICAL LARGE BATTERY INSTALLATION OF WEBCELL DIALYSERS IN VISCOSE RAYON PLANT FOR THE RECOVERY OF CAUSTIC SODA

DIALYSIS MAY BE THE SOLUTION OF YOUR PROBLEM TO AVOID STREAM POLLUTION *and* TURN LIQUID WASTE INTO PROFIT

Industries employing certain liquid solutions in their process are confronted with the problem of stream pollution in the disposal of waste. Dialysis may be the solution for you, as it has for others, to a low cost method of preventing stream pollution —plus the saving of the cost of a neutralizing agent and a profit from waste through recovery.

The process is now in profitable operation in many fields for the:

RECOVERY OF ALKALIS & ACIDS

REMOVAL OF ACIDS, ALKALIS OR OTHER NON-WANTED MATERIALS

PURIFICATION OF SOLUTIONS

MANUFACTURE OF BY-PRODUCTS

MADE OF LUCITE — The action of transfer and separation can be clearly seen throughout the experiment

LABORATORY MODEL

Colleges, Universities and Research Laboratories are now using the Webcell Laboratory Model for the study of dialysis and are conducting experiments in Recovery, Removal, Purification and Separation of solutions. The results obtained can be closely translated into terms of the expectancy from the larger production units.

For further information, write for bulletin 5B.

BROSITES MACHINE COMPANY INC.

50 CHURCH STREET (Cable Address—BROMACH) NEW YORK 7, N.Y.

TELEPHONE DIGBY 9-3600

based on actual measurements. The laboratory technicians may do valuable work in measuring and evaluating fiber qualities, but these findings are difficult to apply in a practical way to bale selection in a mill using many hundreds of cotton bales per week. The skill, knowledge, and experience of the cotton classer is still recognized as the best assurance of efficient bale selection and maintenance of uniform yarn quality.

Bates Floors

(*Continued from page 117*)

Chief fault was a general roughness and discoloration. In some areas the floor surface was spongy and splintery; wood fibers were crushed and broken from trucking and traffic.

Cause of the trouble was believed to be prolonged use of scrubbing and repeated application of strong soap solutions. Water had apparently penetrated minute cracks and fissures in the unprotected wood, softening the cellulose fibers and causing deterioration and breakdown. Discovery of this condition explained why floors became dirty soon after scrubbing; and why it was hard to dislodge surface dust, dirt, and lint in sweeping aisles, etc.

RENOVATION. First steps in setting up the new dry-cleaning program of floor reconditioning and maintenance were taken in a limited area to avoid unnecessary confusion. Work was done during regular working hours; production was not interrupted.

Flooring was carefully checked, broken boards were replaced, and all nails were slightly countersunk. Shims or other supports were placed under ends of loose boards; major differences in adjoining floor heights were corrected; protruding ring bolts, etc., were removed. Nailing around oil pans under machines was inspected and tacked down where necessary.

SANDING. Next step was to get rid of rough, spongy surface fibers in order to have a clean, level, new-wood floor surface. This was done by sanding with a special textile-type floor machine, using a 12-in. sanding drum.

In some sections where floors were especially bad, the maintenance crew saved time by presanding. This was done with the same heavy-duty floor machine, using an interchangeable drum-mounted accessory called a Revo-tool. Equipped with alloy-steel cutters mounted on the outer rim of a cylinder-shaped steel "cage," this device quickly pulverized and cut off dead topwood fibers, then picked them up—in one operation.

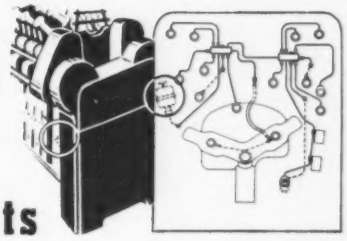
Rotation of the Revo-tool threw heavier material back into the built-in

LEADING MILLS

PROFIT

with "metered" lubrication!

Here's one case history . . . a leading Southern mill (name on request) compared Bijur lubrication on 244 spinning frames with hand oiling on the rest of their 500 spinning frames, and realized a saving of over 46 man hours of oiling time per week . . . plus a 33 1/3% reduction in lubricant. By converting maintenance time into more time for production, the Bijur system helps protect profits!



Bijur-oiled bearings cut costs

by running smoothly on a correct oil film constantly maintained while the machine operates. Bijur automatic lubrication is simple, effective, and "metered" to each individual bearing's need. As a result, oiling time is reduced, operators are released for production, there's no drip, drainage, or waste. Maintenance and down-time are minimized . . . and you avoid stained fabrics and interrupted production schedules from improper lubrication when you use Bijur.

● *Completely closed, central, custom-engineered lubrication:* Here's a typical spinning frame installation where the Bijur system regularly lubricates 17 important points, all concentrated within the head end, while the machine is in operation. Each point automatically receives its required "metered" quantity of oil at one and the same time. There's no oiling time, down-time, or "forgotten" bearings with Bijur on the job.

When ordering new machines... specify BIJUR!

BIJUR LUBRICATING CORPORATION

LONG ISLAND CITY, • NEW YORK

Write today for your copy of "Metered Lubrication of Textile Machinery"

BIJUR Lubricating Corp., Long Island City 1, New York

Please send me a copy of your new Bulletin 6A

"Metered Lubrication of Textile Machinery"

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ADDRESS .....

Hard Maple Floor in Rayon Mill—Photograph Courtesy Westinghouse Electric Corporation

resilient

NORTHERN HARD MAPLE for greater efficiency

● Northern Hard Maple is *the truly resilient* flooring for workers' comfort in textile plants. Smooth Northern Hard Maple is a *comfortable* floor—warm and dry. Its resiliency holds off fatigue—cuts down the accidents and mistakes that occur because workers are tired.

A floor of Northern Hard Maple is a true floor—not a floor covering. And, the *long life* of Hard Maple and low maintenance cost mean sound investment value to mill owners.

Yes, Northern Hard Maple Flooring keeps efficiency *up* and keeps costs *down*. Smooth-surfaced; Hard Maple Floors create no dust, do not catch lint, can be cleaned by brushing alone, speeds up traffic, and cuts floor costs all along the line.

You will find Northern Hard Maple the ideal floor for textile mills. Its superiority is acknowledged—consider **MFMA** (trademarked) Maple. Your engineers are well acquainted with this fine flooring. Association supervised and guaranteed.

See Sweet's

Section 13g/6, for catalog data. Write us about your maintenance and floor finishing problems.

MAPLE FLOORING MANUFACTURERS ASSOCIATION
Room 392—46 Washington Boulevard
OSHKOSH, WISCONSIN

FLOOR WITH *NORTHERN* HARD MAPLE
BEECH AND BIRCH

hopper on the floor machine; a vacuum system sucked lighter dust and dirt into a fabric bag.

Use of this attachment on the machine saved considerable time, particularly in spinning aisles and other areas where travelers were imbedded in the wood. Action of the Revo-tool knocked out traveler fragments and paved the way for sanding.

Floors were sanded with the grain, ending with No. 0 paper to assure a clean, bright, new appearance. Final touches in cleaning were made with a portable, vacuum-equipped edger. This was used along the baseboards, against machine legs, posts, and oil pans. The few inches of remaining space in hard-to-reach spots, like corners, were cleaned up with a standard hand-scraper.

SEALING. The second step in reconditioning—sealing and hardening the floor surface—was started as soon as final sanding of a fair-sized area (15x 30 ft.) was completed.

A maintenance man carefully swept the floor, then applied liberal coat of penetrating tung-oil floor seal, spreading it evenly with a lambs-wool applicator. Excess was removed with a rubber squeegee. After a brief drying, a second coat was put on, then lightly sprinkled with sawdust.

Using the same floor machine as before—but fitted with a cylinder of No. 3 steel wool on a revolving drum—the seal was buffed into the floor. Later, after the floor was dry, it was given a final buffing.

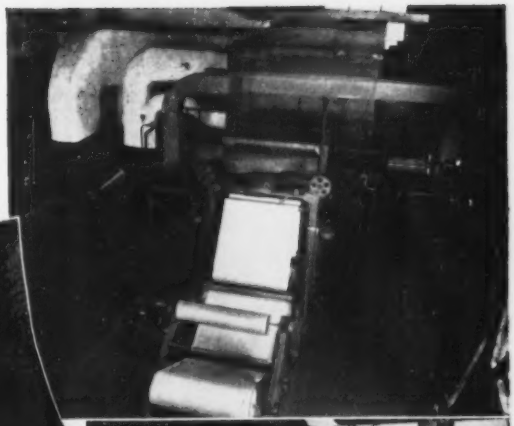
The sealing and hardening process impregnated the top wood fibers with a durable material that provides an "anchored finish"—smooth, hard, and wear resistant. Final buffing whisked off stray protruding "whiskers", increased the luster of the floor, and made it ready for normal mill traffic. Despite the polished appearance of the floor, it proved to be dry and safe for walking.

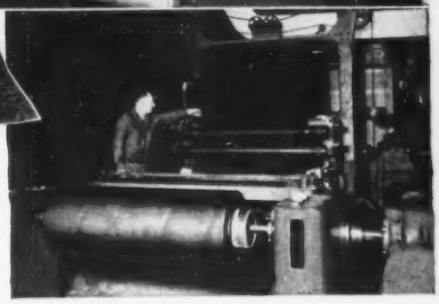
As a final touch to "dress up" the floors, oily areas under machines were painted with a special oil-cover lacquer. This was applied directly over the oily surface, and it dried in about 30 min. Light gray was used in most sections. Four-inch strips of traffic-yellow paint were put down to mark off trucking aisles and special areas.

DAILY MAINTENANCE. Maintenance, the final phase of Bates floor program is the most interesting because of its speed, convenience, and simplicity—daily sweeping with dry cotton mops.

Maintenance men walk down machine aisles and alleys, pushing sectional-type, 48-in.-wide cotton mops. Mops slide easily over the floor, picking up lint, dust, threads, and surface

Gas-fired fabric latexing unit from entering end. Cord fabric passes through the dryer after impregnation with rubber or rubber-like material.





Impregnated fabric leaves the Gas-fired unit dry enough to be spooled immediately.

CONTINUOUS FABRIC LATEXING

Production Drying Operation at INLAND RUBBER CORPORATION

Demonstrates Speed of GAS

LATEX IMPREGNATION is one of the important process applications of heat in which GAS serves so successfully as the high-speed production fuel.

First installation of its type, the continuous latexing system at Inland Rubber Corporation, Chicago, demonstrates efficient utilization of GAS for production-line drying. In this process a water-dispersed material of rubber or rubber-like solids is applied to cotton or rayon tire cord web. The dryer, operating at a speed of 28 yards per minute, reduces moisture content of the impregnated web to less than one per-cent.

Speed-heating with GAS in this modern continuous dryer is an important factor in the tire-cord production line at Inland Rubber Corporation. Executives cite these results—

- Improved adherence of coating to tire-cord
- Minimized non-productive time due to rapid warm-up cycle
- Drying efficiency improved by automatic temperature control
- Reduction in maintenance costs with simplified equipment
- Economies in fuel costs over previous heat-processing medium

Throughout the textile industry GAS serves the myriad heat-processing needs of production-minded executives. Efficient utilization of this flexible fuel as demonstrated at Inland Rubber Corporation, emphasizes the possibilities for maximum return on an investment in modern Gas Equipment for textile processing. They're worth investigating.

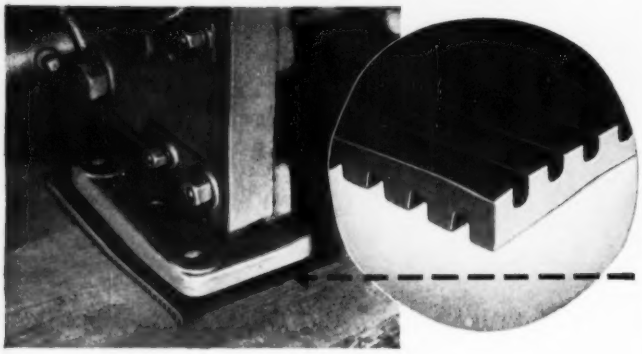
Continuous latexing system designed and installed by Industrial Ovens, Inc., Cleveland, engineers and manufacturers of heat processing equipment.

AMERICAN GAS ASSOCIATION

420 LEXINGTON AVENUE • NEW YORK 17, NEW YORK

MORE AND MORE... THE TREND IS TO GAS FOR ALL INDUSTRIAL HEATING

How to take the "Wear and Tear" out of VIBRATION



...and look at the results you get with these ISOMODE* PADS

You're sure to improve operations and save money by controlling vibration and impact. For experience has shown in countless cases how hard strains and stresses are on machine adjustments, on men, on buildings. Now, you can lick the problem economically with Isomode Pads. From the oscillograms taken at a typical installation, you can actually see the great reduction in vibration transmitted to the floor!

Isomode Pads are effective under practically all machines. The more machines they're used under, the more noticeable the improvement. No nerve-wracking jars! Less noise! You conserve manpower efficiency, protect accuracy of machines. *In most instances, you can eliminate bolting to floor or special bases.*

Use Isomode Pads under *any* weight of machinery. A 30,000 pound press? Pads are ideal! A 50 pound bench tool? Pads do a job there, too! Merely cut them to area required from standard sizes up to 18"x18"— with ordinary hand shears.

Why not try some under a troublesome piece of equipment? You'll see for yourself the same, outstanding performance that is satisfying users in over *5000 installations!* **Write for this bulletin!**

BEFORE: Oscillogram of floor vibration. The loom was bolted to a wooden floor, to keep it from "walking," and the vibration of the floor was transmitted to adjoining areas.

AFTER: On Isomode Pads, the loom transmitted negligible disturbance, as evident in this oscillogram, taken at the same point. Noise was tremendously reduced — and no hold-down was required.

* *Reg. U. S. Pat. Off.*

THE MB MANUFACTURING COMPANY, INC.
1084 State Street, New Haven 11, Conn.

dirt. Also, the absorbent strands of the mop help remove oil spots and prevent discoloration. For this reason, frequent sweeping with mops is strongly recommended, particularly in oily areas.

Removal of accumulated sweepings is done mechanically. At 10:30 a.m. and at 2:30 p.m., accumulated lint from weave alleys and machine aisles is pushed out into the main aisles. Here it is picked up "on the run" by a new-type industrial power sweeper equipped with a 36-in. revolving brush and vacuum dust control.

The sweeper, which drives like a car, travels at 4 to 6 mph., sweeping a path 36-in. wide. Average hourly coverage is about 27,000 sq. ft. At longer intervals, if needed, Bates floors are rapidly "dry cleaned" (steel-wool buffed) with a floor machine—the same equipment, except for replacing the sanding drum with a steel-wool roll, as was used in the original reconditioning.

It is only when floors in some areas become traffic stained that dry rebuffing with the floor machine is needed. The operator guides the machine down aisles, between machines, etc., working as close as possible. As the steel-wool cylinder revolves, it buffs off dirt and grease, throwing heavier material into the machine's built-in dust hopper. Lighter dust is simultaneously drawn into the vacuum bag.

In some heavy-soilage areas at Bates, floors are rebuffed every 2 weeks; in other sections rebuffing every 6 or 7 weeks is sufficient. Resealing will be needed only about every 12 months.

MECHANIZATION PAYS. Because the mechanized dry-cleaning program proved so satisfactory for floors, Bates has recently tried mechanized equipment in other areas. For example, instead of push-broom sweeping to pick up chemical dust and debris in the bleachery, a power sweeper is used. This machine combines the mechanical action of a revolving brush with a vacuum to allow almost dustfree operation. No water spray, chemicals, or other pretreatment are required.

In addition to sweeping up accumulated lint, dust, and debris from the aisles in departments with wood floors, and in the bleachery, the power sweeper is also used to keep sidewalks, alleys, and parking areas clean. Bates has found it useful, too, in sweeping shipping rooms, storage rooms, and loading platforms.

To date, Bates has not been able to give a detailed cost comparison between the new floor program and the old method of scrubbing. Conversion to the new system has not been completed, and present floor-care standards are much higher than before, making comparison difficult. Present

They're both right! For today, most textilemen know that the use of a soap or a synthetic in wet processing operations depends on the nature of the operation, the properties of the fiber, etc. Some operations call for high wetting and penetrating action—others for high detergency or emulsifying power. That's why certain textile processes call for soaps, others for synthetics . . . and Armour makes the best of both. For instance . . .

You need a soap—

In fulling wool—a soap with good lubricant properties like Armour's FLINT CHIPS.

In finishing cottons—a low titered soap, free from rancidity like Armour's CERTIFIED or TEXSCOUR.

In finishing synthetics—a high purity soap, free from rancidity like Armour's FLINT CHIPS, CERTIFIED or TEXSCOUR.

You need a synthetic—

In dyeing cottons and wool—a synthetic that has stability to acid and dye-suspending action like Armour's REGAL or ENERGETIC.

In scouring water repellent or resin treated fabrics—a synthetic with good detergent action like Armour's TRIUMPH or REGAL.

In desizing cottons—a synthetic with rapid penetration and wetting action like REGAL.

You can use either a soap or synthetic—

In kierboiling cottons—and in boil-off—a soap or synthetic with rapid penetration and/or soil removing and suspending action like CERTIFIED or FLINT CHIPS—REGAL or ENERGETIC DETERGENTS.

In scouring raw wool—a soap or synthetic with good detergent properties, easy solubility and rinsability like RE-NU and TEXSCOUR or TRIUMPH and REGAL DETERGENTS.

Armour has a quality soap—a quality synthetic for your every textile use.

WRITE TODAY!

Please send me Armour's handy reference chart to help in selecting the right soap or synthetic for each textile processing operation.

Name..... *Title*.....

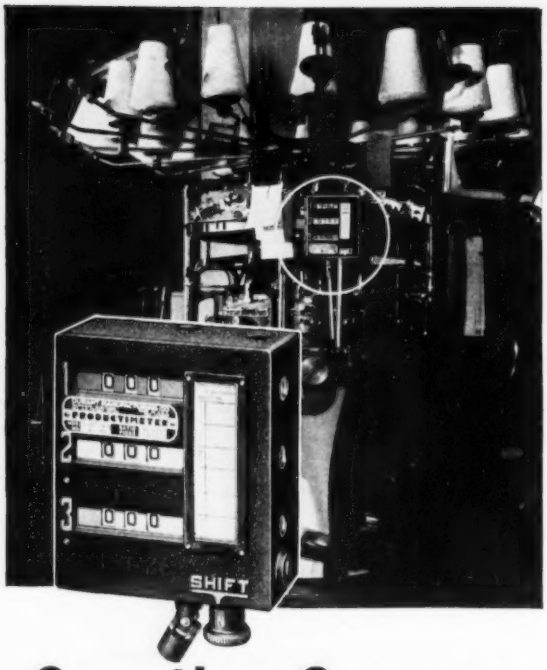
Firm.....

Firm Address.....

City..... *Zone*..... *State*.....

ARMOUR *Industrial Soap Division*

Armour and Co., 1355 W. 31st St., Chicago 9, Ill.



Counting Courses

on a

CIRCULAR KNITTING MACHINE

Dependable, accurate measurement of production is assured with Productimeter three-shift Course Counters. Losses due to weight variance are completely eliminated. Constructed with "shutter-mechanism" to make tampering impossible — only actual production and operators' accomplishments can be registered on the counter. Productimeters increase operator efficiency and help maintain maximum production.

Precision engineered and ruggedly built for long, continuous usage . . . there is a Productimeter for every application of counting in the textile industry.

Send for Catalog No. 50

DURANT MANUFACTURING COMPANY

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PRODUCTIMETERS

SINCE 1879

Speedometers OF INDUSTRY

methods allow coverage of more area than before without additional manpower, so a definite saving seems probable. In addition, long-range cost advantages are foreseen in reduced accident claims, less expense for floor repairs, and avoidance of soilage to fabrics.

Wiscasset Air Conditioning

(*Continued from* page 133)

NO MECHANICAL CONNECTIONS. The magnetically operated adjustable-speed coupling, called the magnetic drive, couples the motor to the compressor by magnetic means only. There is no mechanical connection. The magnetic drive consists of only two main elements, a magnet and a ring. The magnet consists of salient poles mounted on a spider and carrying field coils. Its construction is practically the same as the rotor of the synchronous motor.

The ring consists of a solid-steel ring in the smaller sizes and of a laminated core and squirrel-cage winding in the larger sizes. The magnet acts as a rotor inside the ring. Both are free to turn, however, with the ring (or outer element) coupled to the motor, and magnet (or inner element) attached to the compressor or gear unit.

As the driven element, or ring, is driven at motor speed, there is relative motion between it and the magnet. When the magnet is excited, this motion induces eddy currents in the ring and causes a turning torque to be transmitted through the airgap. At any slip, the amount of torque is roughly proportional to the excitation. By varying the amount of excitation, the transmitted torque is controlled.

The speed change is said to be obtained smoothly and with no jumps. Precise speed adjustment is achieved by means of the Regutron, an electronic control which acts as the "nerve center" between the magnetic drive and the compressor. When a temperature decrease is called for, the Regutron senses the needed change; and higher compressor speed is needed. Instantaneously, the magnetic drive comes up to exactly the new speed needed and holds it there without variation. When a temperature increase is needed, the action is reversed. At all times the Regutron stands alert to the slightest temperature and humidity variation and corrects it immediately.

In the planning of the original refrigeration installation, it was contemplated that at some future date the mill's looping and seaming department would also be air conditioned; and the initial design of the refrigeration plant provided spare capacity for conditioning the area. In the early part of 1948,

℞ *for "ailing" woolen systems–*

PROXOL WOOL OIL

Proxol Wool Oil is "just what the doctor ordered" for woolen systems. When atomized and sprayed on the scoured wool, Proxol assures vibrant health for your yarn and finished goods.

℞
Here is the formula for this re-vitalizing tonic:
1. Self-emulsifying.
2. Small emulsion particle size.
3. Anti-static.
4. Non-corrosive.
5. Reduced fly or waste.
6. Quick spreading properties.
7. Excellent carding characteristics.
8. Increased spinning efficiency.
9. Uniform yarn and cloth.
10. Excellent aging characteristics—
no odor or discoloration.
11. Scours easily, even after aging in the cloth.
12. Minimum residual oil content.

Your woolen system will act and feel "right on top of the world" when you prescribe Proxol. *You* will feel the same way when you observe the trouble-free operation and the quality yarn and cloth produced with Proxol.

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Makers of Olate Flakes the universal low titer textile soap

FLASH there's BIG NEWS in store for NYLON THROWSTERS from U.S. ACME
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THE NEW U. S. ACME TAPERED PACKAGE DOUBLE DECK TWISTER
a brand new machine designed to eliminate the present day headaches of the nylon throwster!

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Cost-wise or beauty-wise, here's the machine for perfectly built TAPERED PACKAGES! Higher spindle speeds are produced . . . inexpensive tubes replace troublesome, expensive, take-up shafts . . . constant and positive tension is maintained while twisting and an equal control of tension while sizing! *Watch for it— SEE IT—boosts production and quality, reduces maintenance, cuts operating costs!*

ANOTHER "FIRST" FROM U. S. ACME!

U.S. TEXTILE MACHINE CO.
600 Gilligan St.—Scranton 8, Pa., U.S.A.

mill management decided to proceed with this portion of the program, and at this writing the installation is about to go into operation, utilizing refrigeration capacity previously installed. This result is obtained by supplying chilled water from the refrigeration machine to a completely new air-handling system serving the looping and seaming area.

Automatic Blending

(*Continued from page 137*)

large Fiber Meters and one small unit for waste, droppings per machine every 9.1 seconds could be: No. 1, 2 lb.; No. 2, 18 oz.; No. 3, 9 oz.; and the waste unit, 5 oz.

Each Fiber Meter is equipped with three sets of switch controls. One panel has a switch each for a light in the feeder hopper and for the operation coil. A box switch provides for both automatic and hand operation of the Fiber Meter. A third control box on the left side of the machine, close to the other two controls, switches on and off the electric motor that drives the machine.

DROPPING CONTROL. Dropping of a uniform amount of fibers to the conveyor belt is accomplished through an electronic coil. When fibers are lifted by the lifting apron to the maximum height, the material is pushed into a dropping pan by a hackle comb located at the top of the lifting apron. The fibers are dropped on the belt when the jaws of the pan are opened. With a battery of several Fiber Meters mounted along a conveyor belt, drops from all machines are made simultaneously, thus insuring uniformity of the mix to be delivered to the picker hopper.

Although the Fiber Meter was first applied to the blending of cotton and rayon, there is theoretically no limit to the number and variety of fibers that can be blended by mounting the necessary number of machines along a conveyor belt that supplies the picker hoppers.

A minimum of maintenance is said to be required in order to keep the Fiber Meter operating efficiently because of the simplicity of construction. With regular lubrication and a weekly check of the machine, no maintenance difficulties have been experienced by the mill in its use of the machine.

The Fiber Meter was developed and patented by Marion Mfg. Co., and the original models have been in use for several years. The manufacture and sales rights of the machine have been assigned to W. D. Dodenhoff Co., Greenville, S. C.

HOW MUCH MONEY CAN NEW DU PONT "LUDOX"

☐ save you? ☐ earn you?

Already... many textile men are using this new Du Pont chemical to improve fabrics ... speed production

Whether you are processing natural or synthetic fibers or fabrics, chances are that the new Du Pont "Ludox" Colloidal Silica can help you produce better goods, expand sales with new products or increase production.

Offers new economies and applications

"Ludox" now comes to you as an aqueous 30% colloidal solution of almost pure silica particles, each having a size less than 1/1,000,000 of an inch. It is chemically reactive, highly fluid and substantially free of alkali. This new high concentration gives "Ludox" a much broader range of usefulness—with maximum economy.

Checks fiber slippage

Textile men have already reported excellent results in treating both fibers and fabrics with "Ludox." It has been found, for example, that "Ludox" checks yarn and fiber slippage by increasing fiber-to-fiber friction, and that the increased friction also strengthens the yarn and permits lower twist. This helps increase production, as well.

Many other uses

Others are using "Ludox" to improve sizes and coatings for added bond and film strength, increased friction and water resistance, and less dry tackiness. "Ludox" also has a mild delustering effect on rayons. It has a minimum stiffening effect on the fabric and is not dissolved by dry cleaning solvents. Users are finding *new* ways of applying "Ludox" to their advantage.

Do you have a slippage problem? "Ludox"-treated fabrics, like this rayon, show outstanding resistance to yarn and fiber slippage.

How can "Ludox" help you? A Du Pont Technical Service man will be glad to visit your plant and study your problems.

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Drop Wires

(Continued from page 125)

ning within an hour or less, providing other conditions are favorable.

Carriers should not be confusingly cumbersome or loaded with unnecessary parts; nor over-simplified. They can be plain and made from common materials, such as 1-in. strap iron and angle iron.

MAKING THE HOLDER. Fig. 2 shows the steps in forming the foundation for the drop-wire bracket. This is common 1-in. steel strapping—easy to shape and cut. Rough edges should be sanded off, but not necessarily smooth and polished. On the upper end, the strapping is bent over to take a buckle. A steel bit-snap is welded a few inches down from the buckle; and a canvas strap is secured, the length of which varies with the harness-frame size. On wide wood strips, the bit-snap may be as much as 4 in. below the end. On narrow wood strips, this measurement may be as small as 2 in. Where there is a variation in widths, the wider should be used so that the carriers can be used on any set.

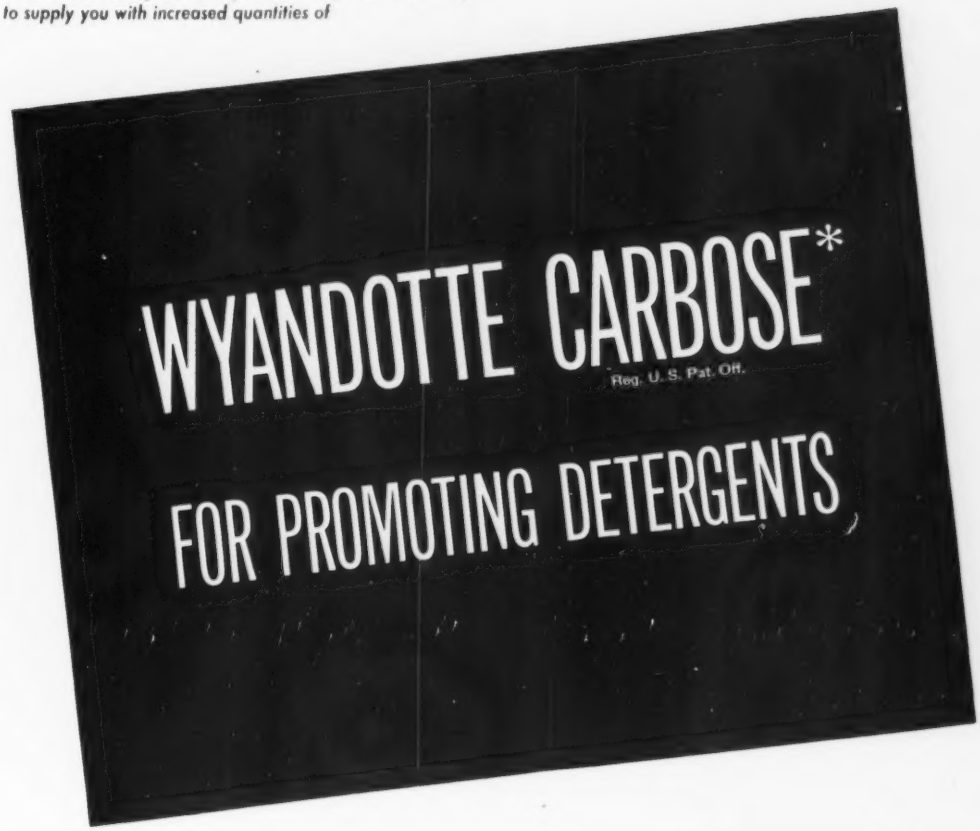
The offset strip welded on the bottom is used as a safety to prevent the unit shifting too far after the strap has been buckled into place. The sketch shows the manner of attaching the strips to a harness set in preparation for placing the drop wires and bars into position for moving.

Two straps are required for each set—one right and one left. These are placed into position by inserting the offset at the bottom between the last two frames and by seating it down onto the last frame. The canvas strap is then pulled through beneath the top heddle ribbons and brought around the front of the set and over the top where it is inserted into the buckle and drawn tight.

One right- and one left-hand bracket are required to position the electrode bars. Shown in Fig. 3 is the right-hand bracket. This is welded to the steel strap slightly below center, so that when the bars are in place the warp yarn will pass through on a horizontal line. The bracket is made from angle iron, metal, or fiber. Metal is welded into permanent position; fiber is fixed with bolts or rivets. Light metals are ideal for this purpose.

Brackets must be shaped according to the number of drop-wire banks used. Usually, the bracket can be for an 8-bank and used for 6-bank, 4-bank, or a 2-bank if required. If a larger bank is necessary, a 12-bank bracket is suitable, since it can also be used for 10-bank setup. The brackets here are for the Rhode-Island-type

As the result of four years of intensive research, specially developed production processes and hundreds of laboratory and field tests, Wyandotte Chemicals Corporation is ready to supply you with increased quantities of



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Wyandotte Carbose has proved its great value in increasing the effectiveness of both "built" and "unbuilt" detergent products. When incorporated in synthetic detergent formulations, small amounts of this unique compound promote detergency to a degree heretofore unattainable.

Thousands of tests on cotton fabrics show that Carbose increases soil removal and whiteness retention . . . helps prevent soil redeposition.

Detergents containing Carbose are already being used in several hundred commercial laundries. Excellent results have been obtained not only with cotton but with all classes of fabrics and with soils running from the lightest to the heaviest.

Carbose offers important advantages in a wide variety of other applications — such as water-base paints, textiles, paper and adhesives.

Wyandotte Carbose is economically priced and is available in carload quantities. If you would like to investigate what it can do for your product, simply ask your Wyandotte Service Representative for samples and complete information.

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APRIL • 1949

CARD CLOTHING NEWS and views

WRITTEN MONTHLY BY E. A. SHAPE, JR., PRESIDENT **Benjamin Booth Company** PHILA. PA.

STRIP-O-MATIC A New Word That Means Better Carding With A Minimum Of Strippiug!

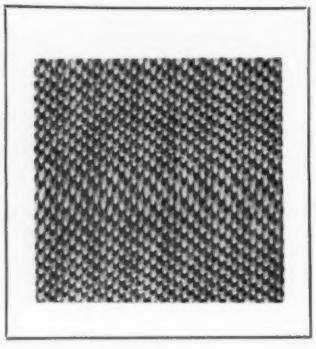
WHEN you hear of anything *new* in the textile industry, you are naturally "all ears" because it may be a means of saving you time, labor, and money over your present set-up. Such a new product is **STRIP-O-MATIC**, the new Booth flexible card clothing that runs virtually without stripping and at the same time cards better and lasts longer than the conventional type.

STRIP-O-MATIC should not be looked upon as merely an improvement over other card clothing. It is far more than that. It is essentially a new development in card clothing that was non-existent until designed by Booth. That is why we are so enthusiastic about our new "baby."

How did we achieve this revolutionary card clothing, you may ask. And rightfully so. Because it is amazing that after all these years, what seemed an impossibility is now an accomplished fact.

Our answer is: a combination of ideas, with every "spec" worked out in detail.

Take the shape of the wire, for instance. Streamlined, it has a definite ratio of length to width, and is shaped like a torpedo. It enables us to give you sufficient points transversely while eliminating points longitudinally. This is true because the wire is fine gauge in width and can be set as close as fine round wire. It is extra strong, and will not lose pitch or bend backward, even though there are many fewer teeth per inch lengthwise. The greater amount of uninterrupted open space permits free movement of stock in and out of the wire.



The foundation, (so strong)—and the plastic face (so resistant to elements in emulsion), certainly play no less an important part in making STRIP-O-MATIC almost self-stripping, economical to put on and maintain, and saving in labor, "down time," and stripping waste.

We promise you a never-to-be-forgotten experience in Carding by ordering today a sufficient quantity for a practical trial. You'll be amazed at the results.

*Pat. applied for.

May we hear from you?

Thanks,

E. A. Shape Jr.

President, **Benjamin Booth Company**

drop. If other types are used, the design can be changed accordingly.

In Fig. 3, the slots are for the electrode bars that hold the drop wires; no place is allowed for the separator bars, since these are put in at the loom and the saving in weight is a factor in handling.

A hinged cover made from a short length of angle iron is placed over the bracket to keep the electrode bars firmly in place. To prevent damage to the bar ends that may break insulation and cause short circuits, a strip of soft or sponge rubber is glued to the under side of the cover to cushion the pressure on the bars. On C & K electric drop-wire bars, contact-bar sheaths can be used to protect the bars.

KEEP ENDS FROM SAGGING. Two ¼-in. rods are positioned on the carrier bracket to prevent warp ends from sagging beneath the drop-wire prongs and entangling the yarn. One rod is placed next to the harness heddles; and, after the electrode bars are positioned, the second rod is placed in. In place of holes, slots are cut into the bracket heads so that the rods can be slid through the slots and into the holes (as shown in Fig. 3). Threaded ends allow the rods to be tightened securely to prevent dropping from place. In addition, a piece of cloth can be swung under the wires and fastened beneath so that the prongs are completely covered. This is not necessary, unless the warps are to be stored for several months previous to mounting.

Warp yarn should be just taut enough to prevent sagging. If too tight, ends will cut out at the reed where they will be drawn against the sharp dent edges.

The bottom half of the bracket can be molded from aluminum or shaped from metal by welding. This bottom portion has a longer extension than the upper section. Two holes are provided by which section heads are attached and held in place with a canvas belting around the full beam. Section heads are covered with sponge rubber to avoid damaging warp yarn when the carrier is in place and the warp in transportation.

Regardless of warp size, the belting allows the carrier to be used for any length up to its full capacity.

DROPPING THE WIRES. During twisting-in, sufficient frames must be available to avoid tying up the machine. When the twisting machine is moved away after the warp has been completed, harness frames are lifted individually and checked for missing ends. Temporary bar holders are placed and the holders shifted back

MANUFACTURERS' BULLETINS

A REVIEW of the month's outstanding trade literature. Items are listed one month only—no repeats.

Free FOR THE ASKING

1. Machinery for knitting, weaving, and dyeing is described in a catalog and reference book prepared by Morris Speizman Co., Inc. The emphasis is on domestic knitting machines and auxiliary equipment.

2. Piece-goods handlers will be interested in a new cloth-roll-puller featured in a folder issued by Cutting Room Appliances Corp. A full-size sketch is shown.

3. Xerography, a dry-printing method which produces permanent images by electro-mechanical methods without inks is fully described in a booklet available from The Haloid Co.

4. Is identification important? Distinctive marking of textile products is the subject of a report prepared by Kaumagraph Co.

5. "A Laboratory Study of Padding" is the title of the latest technical bulletin in the series issued by Calco Chemical Div. This bulletin deals with studies of cotton fabrics.

6. An abrasion-testing machine built for the National Bureau of Standards is described in a bulletin available from Sherman W. Frazier. Testing procedure for textiles is shown in picture form.

7. Users of Wilcox & Gibbs "Feldlock" and "Dualfeed" machines are invited to write for a new instruction book and parts list for those machines.

8. A chlorine technical-data book has been prepared by Pittsburgh Plate Glass Co. The new manual presents charts, diagrams, and illustrations concerning the production and handling of chlorine.

9. Ball-bearing size-roll units for No. 7 Saco-Lowell and Cocker slashers are described in a bulletin issued by Precision Gear & Machine Co., Inc. The design for each machine is illustrated.

10. Improved angular guides and conical openers for guiding any fabric centrally are described in a circular prepared by Birch Brothers. Specific places for using the machines are listed.

11. Temperature and pressure recorders are described in a catalog offered by Penn Industrial Equipment Corp. Details of bulb construction and pen-arm movement are illustrated by photographs and line drawings.

12. Jack, carder, and twister spools for woolen and worsted yarns, rayon, rope, and cordage are featured in a folder published by Hubbard Spool Co. The spools are said to be warp-proof, break-proof and split-proof.

13. Chemical products for textile manufacturing and finishing are alphabetically listed and described in non-technical language in a folder prepared by Hercules Powder Co.

14. Liquid waterproof cement for use on textile belting is described in a bulletin from J. E. Rhoads & Sons. There is also a section on an emergency gripping material for slipping belts.

15. A multi-motor slasher drive with tension control is described in a bulletin available from Westinghouse Electric & Mfg. Co. Typical installations are pictured.

16. For dyehouse and bleachery walls and ceilings—where vapors quickly discolor paint—use of Barreled Sunlight White Chemic Enamel is recommended in a folder available from U. S. Gutta Percha Paint Co.

17. Automatic flow-ratio controllers for liquid-to-liquid and liquid-to-solid proportioning are described in a bulletin prepared by Fischer & Porter Co. Graphs show the comparison between variable-head and variable-area flow meters.

18. Variable-speed motors of a new type are presented in a 16-page bulletin issued by U. S. Electrical Motors, Inc. Several multicolor cutaway sections show their operation very clearly.

19. An all-electronic moisture-content controller has been developed by Barber-Colman Co., and a bulletin is available on the new product. Several additional advantages over the older MCC unit are discussed.

20. Rug-and-carpet-making equipment is highlighted in a recent issue of *Proctor Progress* of Proctor & Schwartz, Inc. It is said that their equipment is the first to handle the wool and last to handle the finished carpet.

21. Roof failures—their causes and prevention—are discussed in a booklet published by The International Nickel Co. Full data on a Monel roofing sheet is presented in understandable language.

22. Right cloth-handling devices are illustrated and described in a bulletin from Mount Hope Machinery Co. There

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is a good section on their continuous roll feed that has three variations.

23. Cathode-ray oscillograph applications in the textile industry are presented in an article in *The Oscillographer*, a publication of Allen B. DuMont Laboratories, Inc. Several weaving applications are discussed.

24. A pyrometer controller which features electronic proportioning is described in a bulletin published by The Bristol Co. The bulletin describes application of the instrument to proportioning current input to electric furnaces, ovens, and the like.

25. "Your Help Has Extra Hands" is the title of a folder prepared by *I.* Brinton Co. Versatility and simplicity of their knitting machines are stressed.

26. Are you ready for a tornado? The dramatic story of a cotton mill wrecked by a tornado is given in a recent issue of *Factory Mutual Record* published by Associated Factory Mutual Fire Ins. Cos. Roof anchorage is stressed.

27. A general-purpose counter available in four series is featured in a circular published by Veeder-Root, Inc. Speeds attainable with each type are given.

28. The story of Cheney Brothers Silk Mills is given in a recent issue of *Parks Parables*, a Parks-Cramer Co. publication. Their certified air system is highlighted in the article.

29. Trucks, barrels, and boxes made to your specific dimensions are outlined in a bulletin from Fibre Specialty Mfg. Co. Stock sizes of the several items are also listed.

30. Alloys for corrosive services are the subject of a bulletin issued by The Duriron Co., Inc. The bulletin deals with 130 corrosives, and many corrosion-resistant charts are included.

31. Plastic spindle adapters for lighter and larger packages are described in a circular from National Plastics Inc. The adapters are for top-driven bobbins.

32. Tenter clips adapted for tentering or mercerizing are described in a folder issued by Winsor & Jerauld Mfg. Co., Inc. There is a full-page sketch showing construction of the clip.

33. A catalog of V-belt drives has been prepared by Rockwood Mfg. Co., Ind. Detailed specifications of belts and 14 types of sheaves are included.

34. How light can a beam be? "As light as a feather," says a folder issued by Hayes Industries, Inc. Section beams, loom beams, and tricot beams are available in the lighter metals.

35. An all ball-bearing oilless comb box for standard woolen and cotton cards is pictured in a leaflet prepared by Odom Machine Mfg. Corp.

36. Air-venting of industrial steam equipment is the subject of a folder prepared by Barco Co., Inc. There is a very good discussion on the effect of air in steam.

37. "Vulcanized" starch for controlled swelling and controlled viscosity is described in a leaflet available from National Starch Products.

38. Warp-sizing hints are given in a little booklet prepared by Seydel-Woolley & Co. There is a handy table on gallons per inch depth of a round size tank on the back inside cover.

39. Adjustable-type revolving joints for air, oil, water, gas, or steam are featured in a circular issued by Barco Mfg. Co. Ordering instructions and a parts list are also given.

40. Modern slasher production with variable-speed control equipment is the subject of a booklet published by Reeves Pulley Co. Included is a condensed list of operational features and results produced.

41. Textile-machinery lubricants which it produces are listed and described in a folder prepared by The Pure Oil Co. A new textile lubricant—a heavy, clear oil containing special additives—is discussed.

42. A proportioning pump for controlled-volume pumping of fluids is described in a bulletin from Lapp Insulator Co., Inc. The diaphragm is said to have unlimited life.

43. A revolutionary, new twist-setter is described in a catalog available from Seydel-Woolley & Co. The machine is claimed to deliver high production in a small floor space.

44. A lint collector especially designed for the textile industry is featured in a folder issued by American Air Filter Co., Inc. The unit cleans air exhausted from picking, opening, and similar machines.

45. "Intelligent Use of Strobotac" a TEXTILE WORLD reprint, is available from General Radio Co. The article develops ability to increase production and decrease seconds through use of stroboscope equipment.

46. Not Route 66—but a digest of 66 machinery and equipment maintenance jobs on which Oakite materials are being used is the subject of a bulletin prepared by Oakite Products Inc.

47. Sanitary tanks for heavy and light processing where constant agitation is desired are described in a folder published by Metal Glass Products Co. Adaptation for cooking or cooling is given.

48. Are you doing anything about your power factor? A pocket-size booklet from Electric Machinery Mfg. Co. explains the essentials of power factor and how to improve it.

49. Thirteen classes of textile loom accessories and power-transmission equipment are catalogued in a publication of Schmidt Mfg. Co. The foreword explains procedure for ordering "tailor-made" items.

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slightly so that the dropper can make the drop. When dropping is completed, warp ends are matched up and electrode bars are put in through the drops. The steel straps are placed on the frames. Bracket covers are raised and the electrode bars moved one at a time into position. After bars are placed and the ¼-in. rods positioned, the harness is ready to be tied up.

Moving the tied up harness and drops back onto the beam requires care. Drop wires must be kept up off the warp yarn, while the section heads are slipped in place into the bracket and strapped around the warp. For further safety, heavy corrugated cardboard may be placed between the carrier parts and the warp yarn. The various belts are put on and drawn as tight as possible to avoid damaging the warp yarn. If ready for the loom immediately, the warp may be trucked from the twisting frame and mounted. If it is to be stored for several days or hours, the harness should be further secured by lacing three additional canvas straps around the set and warp to prevent the harness shifting from the original center.

Warps should be twisted in and drops placed ahead of weaving schedule. As soon as a loom has emptied and the cleaning is done, the stored warp can be moved to the loom and mounted without unnecessary delay.

WARP MOUNTING. When using carriers, the warp is brought to the loom in the usual manner; but in mounting, extra care must be taken to avoid shifting and chafing or breaking warp yarn. The harness should be kept intact until the beam has been placed in the warp brackets. Then the section heads and belting may be unfastened and the heads pulled free. The harnesses are lifted with carrier and hung into the loom. All shaft mountings should be hooked and the warp tied in the usual manner onto the apron. This may require the use of only one weight or the let-off tensioned very lightly, just sufficient to keep the warp yarn from slackness.

The bracket cover should be unfastened and swung upward. The nearer ¼-in. rod should be unfastened and the electrode bars with their drops moved back to the regular bracket. It is best to move these back one by one until all have been placed. As the electrode bars are moved, the separator bars are placed as spacers where required.

After all electrode bars are properly placed, the carrier straps may be removed by unfastening the remaining ¼-in. rod and unfastening the top belts from around the harness set. The steel straps are then lifted out of place.

The loom is now readied for weav-

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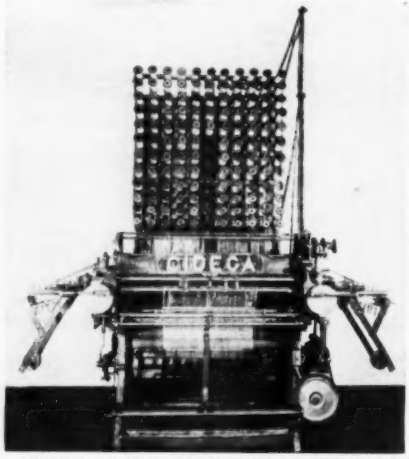

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ing. A short heading is woven in as the shafts are equalized for lift. After all the warp ends are in, the drop-wire motion bracket or heads are secured. All carrier paraphernalia is removed to the twisting department. The fixer is flagged to advise him that the loom is ready to start into production.

There are many do's and don'ts when using carriers and they must be learned by experience. Here are a few:

1. When tying the job for transportation between departments, do a good job to prevent shifting. Use padding whenever and wherever necessary.

2. On heavy warps, plenty of help for short periods is better than a big smash requiring two persons for several hours.

3. Mount the warp into the loom with care. If any warp ends are snagged beneath the drop-wire prongs, they should be freed previous to tying-in.

4. Do not put too much weight on the warp when putting in the heading. The first yard of warp yarn can usually be considered waste.

5. Set the motion in desired alignment. If any bars are shorted, after a large heading has been woven, make a replacement with a good bar.

Don't Blame Cots

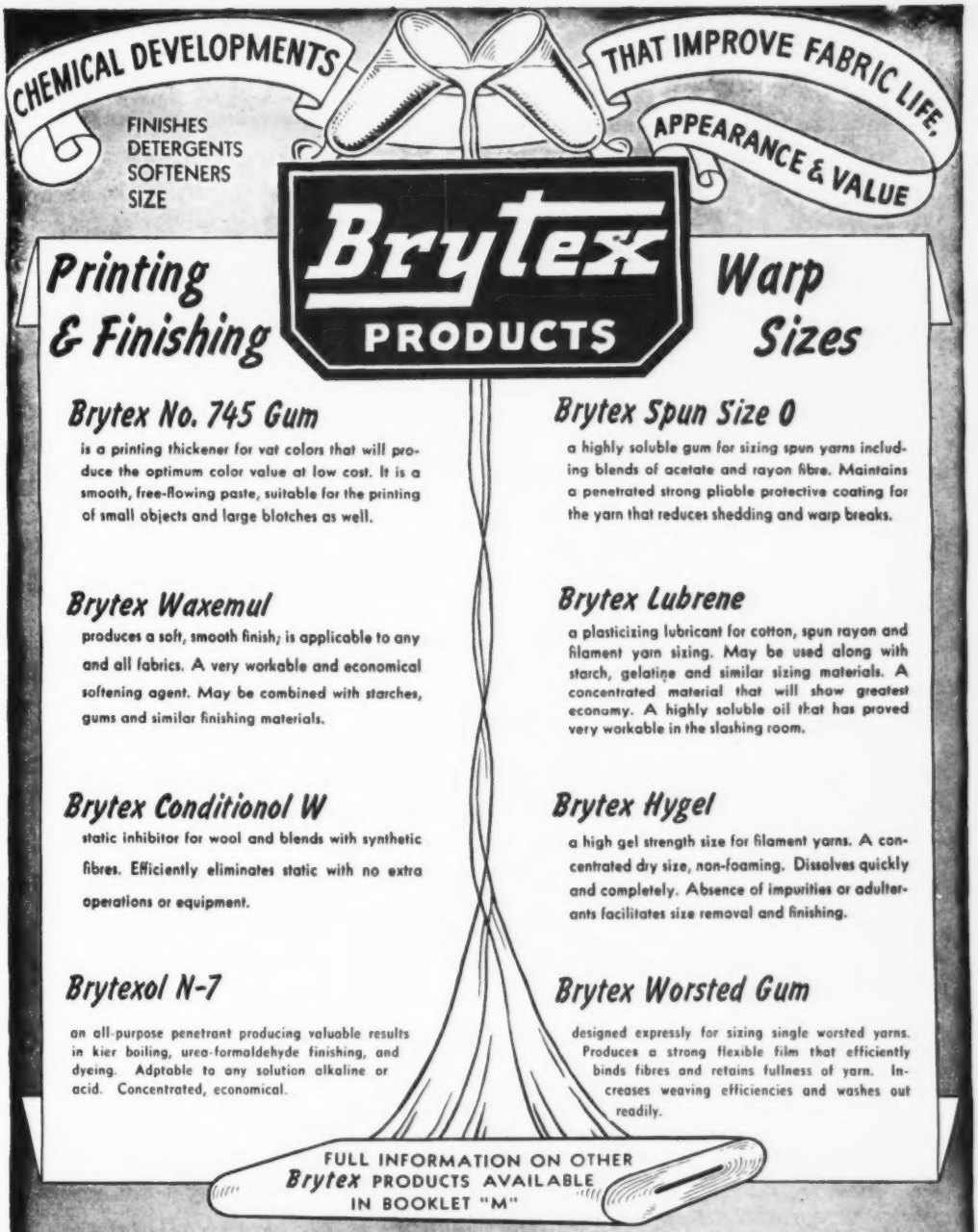
(*Continued from page 127*)

thin layer of moisture on the surface of fibers. This thin layer also has the Helmholtz electric double layer, which binds the water (moisture) to the fiber. A cot, too, will have a film of moisture bound to it by the Helmholtz double layer.

It is believed that when fiber meets cot, the two water layers are pressed together, become one, and tend to bind fiber to cot. No wonder a fiber wants to follow the cot cover around and around. Bear in mind that the attraction is minute; if it were strong, laps would occur virtually every time an end came down beyond a roll.

LAPPING STOPPED. The lapping problem has faced the industry for a long time, and a solution to the problem has been long awaited. The theory evolved by Baymiller of why fiber is attracted to the cot surface and results in lap ups now seems simple. It can be demonstrated by means of the apparatus sketched on page 127. The most important thing, however, is how to overcome this attraction and hence to stop laps.

Baymiller found that the charge (zeta potential) in the water film normally present on the cot could be reduced or neutralized and the attractive force thus be overcome by the incorporation into the cot compound of certain electrolytes (such as animal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static inhibitor for wool and blends with synthetic fibres. Efficiently eliminates static with no extra operations or equipment.
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a highly soluble gum for sizing spun yarns including blends of acetate and rayon fibre. Maintains a penetrated strong pliable protective coating for the yarn that reduces shedding and warp breaks.
Brytex Lubrene
a plasticizing lubricant for cotton, spun rayon and filament yarn sizing. May be used along with starch, gelatine and similar sizing materials. A concentrated material that will show greatest economy. A highly soluble oil that has proved very workable in the slashing room.
Brytex Hygel
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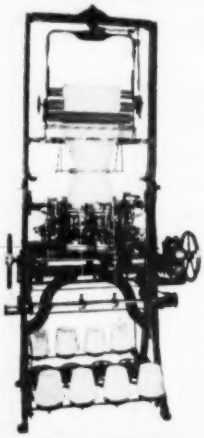

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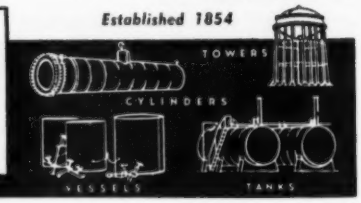


glue). It was then established by actual field tests that cots made from compounds containing a suitable electrolyte did not lap up, and it was shown that the theory was related to the problem when it was found that these same cot compounds would also reduce the electrokinetic potential.

The apparatus sketched is similar to that used to demonstrate the Helmholtz electric double layer. It is known that forcing water through a glass tube produces an electric voltage (streaming potential) and conversely, that a voltage will cause water to rise in a U-shaped tube of small inside diameter. (The water rises on the side with the negative electrode—electroendosmosis).

In adopting this apparatus for his purposes, Baymiller inserted a tube of cot material in the bottom of a U-shaped glass tube of relatively large diameter. A clamp constricted the rubber tube, as shown in the sketch, to the capillary diameter needed to demonstrate his theory.

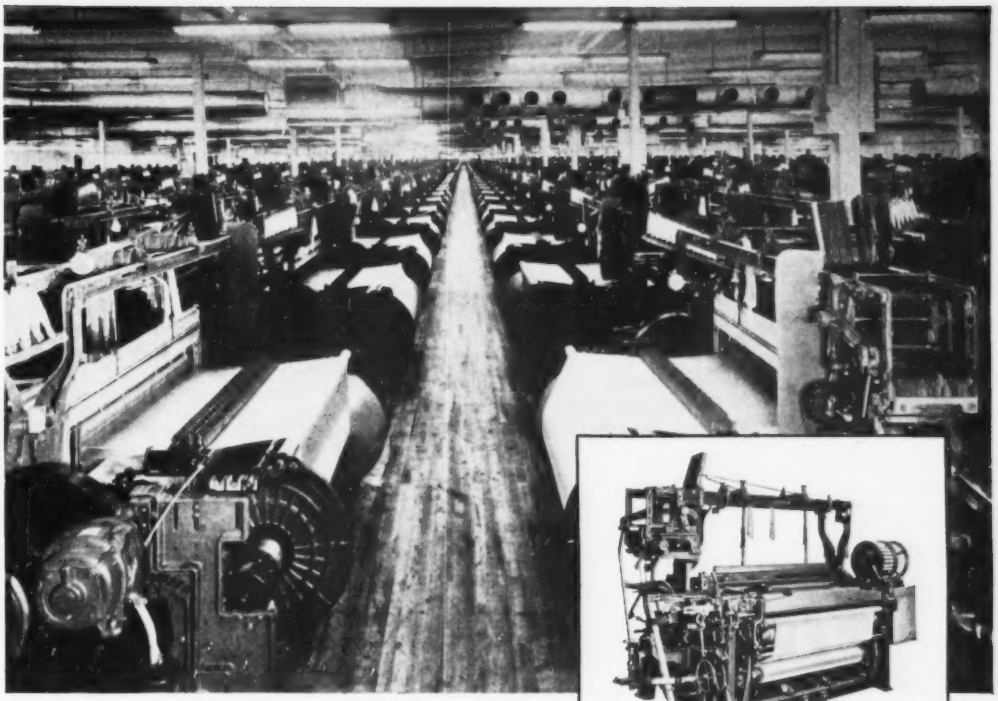
If a material used in the flexible tube causes the water to rise when a current is fed through it, one can predict that this same material used as a cot cover will cause lap-ups. If a current (0.04 milliampere at 720 volts) does not cause the water to rise, the material should not cause lap-ups when used as a roll covering.

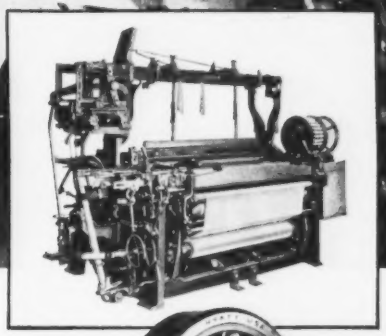
Not all materials that pass the test are suitable for use as cot coverings due to undesirable physical characteristics. But a combination of glue in Buna N rubber is, and it makes a good cot.

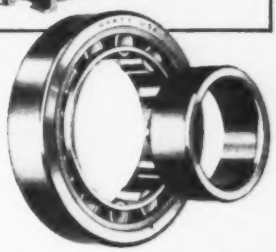
KEEP COTS BUFFED. The electrolyte does not decay during use, but its effectiveness is reduced if it is masked by an accumulation of dirt, finish oils, or other material. When masking occurs, a light buffing or cleaning will make the cots lap-resistant again.

It has been demonstrated that static does not enter into lapping up (but does influence flying of lint). Conductive rubber compounds have been shown to lap badly. Smoothness or minute roughness of the cot surface has also been demonstrated to be of no significance as a cause of lapping. In fact, some very smooth plastics lap badly, while relatively coarse cork does not pluck fibers and cause lapping.

Cot covers that are proved to cause lapping will do so in the presence or absence of static, according to tests made by Baymiller. Cots that don't lap are also unaffected by static found in textile mills. Temperatures and relative humidity in the ranges found in well-operated spinning mills also have no appreciable effect on encouraging or preventing lapping. If a par-







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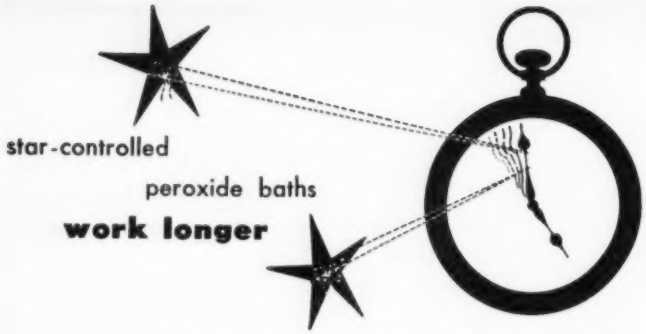

Star Silicate used as an assistant in bleaching holds on to the oxygen molecules in the peroxide bath until release is needed for bleaching. Leading mills find that Star Silicate increases their output and at the same time decreases cost. In either standing bath or saturator systems, Star Silicate extends the working life of the bleach bath.

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ticular fiber-and-cot combination is proved to cause laps, no changes in temperature or humidity will completely stop this tendency.

A quick test to see if covers have a tendency to lap consists simply of breaking a running end just beyond the front roll. If the covering strongly attracts the fiber, a lap will quickly form. If there is no attraction, the running end will spew out in a straight line. A wavy line indicates a slight attraction between the cot and fiber.

If cots that did not produce laps start to have them, try a light buffing. The chances are an accumulation of some sort is interfering with the electrolytic action. Approximately half the cots in use on front rolls today are lap-resistant ones manufactured according to the Baymiller invention.

Synthetic Detergents

(*Continued from page 129*)

is obvious that the goods are then left in better condition for subsequent dyeing operations.

Under neutral conditions, the material exhibits only a mild fulling action which is limited to applications where merely a light top felt is desired. Under alkaline conditions, up to 25% of the normal amount of fulling soap used may be replaced by the detergent. Fulling proceeds normally, and a decided advantage is obtained during the subsequent washing operation since the soap residues are removed much more rapidly and there is a consequent reduction in processing time.

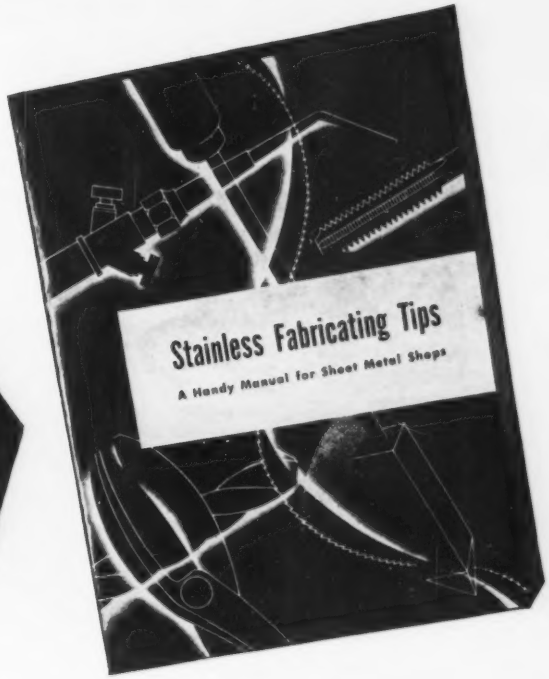
Addition of this acid-stable synthetic-organic detergent to the carbonizing acid aids in the penetration of burrs, etc., which are often difficult to wet. This is a decided advantage.

Paper mills have noticed that by impregnating their wool felts with a detergent such as Nacconol NR prior to a week-end shut down, mildew growths are eliminated, which is particularly useful during the summer. Wool scoured with these synthetics is also given moth-repellent properties which will persist through one rinse.

FOR COTTON. Synthetic organic detergents are widely used in wet-processing cotton, and definite advantages have been demonstrated in kier boiling, peroxide bleaching, washing prints and dyed pieces, and in preparation of absorbent cotton.

This type synthetic detergent is particularly effective in the processing of re-worked stock. Cleaner goods are produced and the necessity for rekiering is essentially eliminated. One to three pounds of the sodium alkylaryl-

HERE IT IS--



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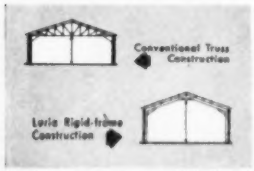

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sulphonate type is used per 1,000 lb. of cotton in the kier.

In hydrogen-peroxide bleaching, it is desirable to cause the peroxide to penetrate the goods as rapidly as possible before the efficiency of the peroxide is expended elsewhere. This can be done with a suitable synthetic organic detergent. A definite reduction in processing time can be demonstrated. A good example of this is in the handling of cotton-wool hosiery where a normal 3- to 4-hr. scouring and bleaching operation may be accomplished in about 90 min. Bleaching of mixed cotton and linen towelling may also be greatly improved.

Synthetic detergents are used in warp-sizing compositions to aid in penetration of the sizing materials into the yarn. They are also used in enzyme desizing baths to bring the enzymes into more rapid and more intimate contact with the sizing materials and thereby aid in more rapid desizing.

For the washing of prints and dyed pieces, synthetic detergents may be used to advantage in conjunction with soap. This applies particularly to the washing of vat colors which requires the presence of a small amount of soap to develop the proper shade. A mixture containing 25 parts of soap and 75 parts of the sulphonate-type detergent is usually adequate for this purpose. Solid naphthol shades may be scoured effectively with the detergent and sodium chloride. The scouring action is rapid and desirable.

The re-wetting action of the detergent is of interest in the preparation of absorbent cotton from stock that has been boiled-off and bleached in an open kier. When processed under these conditions, the cotton still contains a good deal of natural wax which interferes with its absorbency. However, when this cotton is impregnated with low concentrations of the sulphonate-type material, the absorbency is increased to a point where it will meet purchasing specifications for regular absorbent cotton. Cotton treated in this manner possesses an added advantage due to the bacteriostatic property of special detergents, which helps to protect the cotton from contamination by air-borne bacteria.

FOR SYNTHETIC FIBERS. Processors of synthetic fibers were among the first to adopt synthetic detergents because they were so well adapted to their particular uses. These detergents are widely used for the desizing and scouring of viscose fibers prior to the dyeing operation. A scouring solution containing 0.2 to 0.5% synthetic detergent, with sufficient mild alkali to provide a pH value of 9.5 to 10.5, is effective over long periods of time. Pe-

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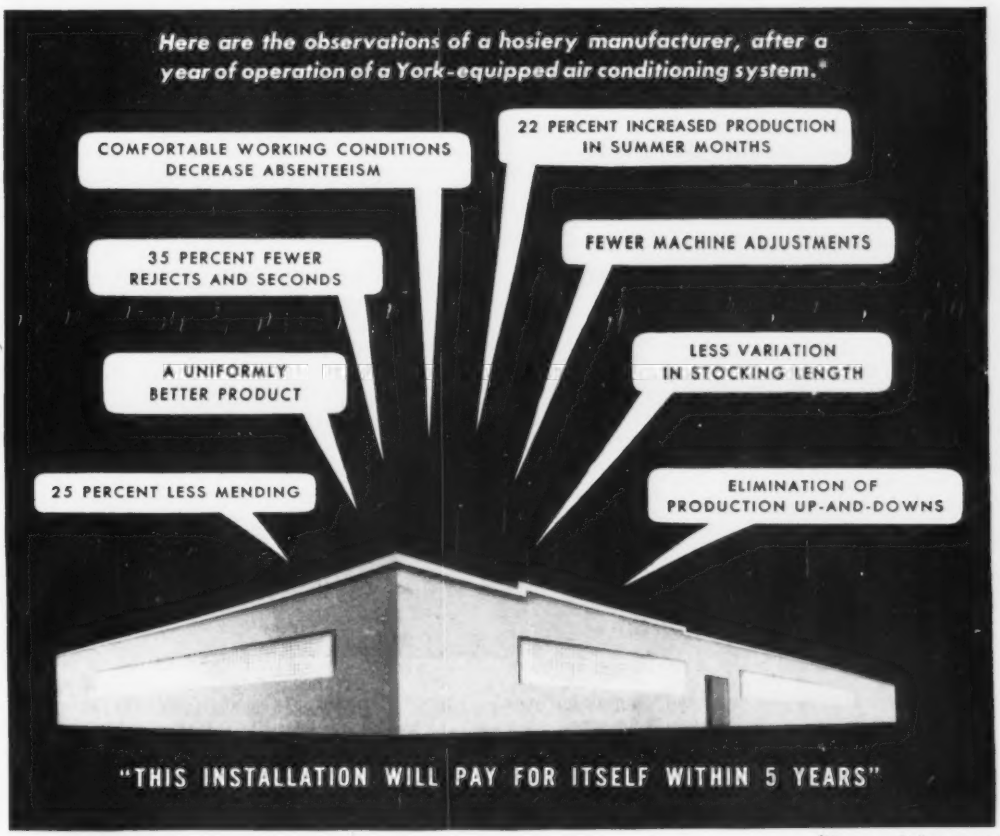
York Corporation, York, Pennsylvania.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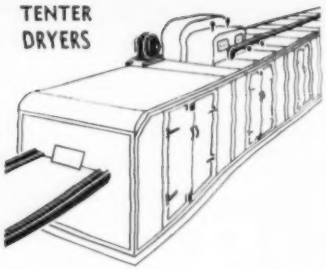

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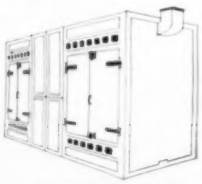

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riodic additions of synthetic detergent and alkali are made to this bath as needed or a constant trickle feed of these supplies may be arranged.

The dyeing of synthetic-fiber piece goods is facilitated by the presence of a synthetic detergent in the dye liquor. This provides for rapid penetration and good levelling action; it also helps to eliminate streaks.

In the spinning of viscose fibers, spinneret life is extended five to eight times between cleanings by dissolving the synthetic detergent in the acid coagulating bath.

A high-quality, silk-degumming process has been developed which utilizes sodium silicate and a synthetic detergent. A stronger and more elastic silk fiber is obtained by this process than when ordinary soap degumming methods are used. Degumming costs by this method are less than half the cost of previous methods.

MISCELLANEOUS APPLICATIONS. The provision of low-cost synthetic detergents for the textile industry has been greatly aided by the consumption of large quantities of these materials by other industries. It is becoming increasingly difficult to mention an industry in which synthetic detergents are not used. Household applications also can take a fair share of the credit for expanded use. Most American homes are familiar with the excellent performance of these products for dishwashing as well as for the washing of blankets, sweaters, and fine fabrics. Industrially, the detergents are used in dairies, pharmaceutical and cosmetic manufacture, metal cleaning, street cleaning, cement laying, etc. Power laundries have learned that they can replace up to 25% of their soap with synthetic detergents and obtain equal to better washing results. This is accompanied, of course, by a worthwhile saving in detergent costs.

Synthetic-organic detergents are receiving more attention for fire fighting. Deep-seated fires in bales of cotton and piles of coal are difficult to reach with water alone. In these applications, the detergent helps the water to penetrate into the burning material and greatly reduces the amount of water run-off. It is estimated that through the use of this wetting agent, water is rendered three to four times more effective.

Textile-mill operators are faced with many problems. Operating costs are high and they are catering to a competitive and quality-conscious market. Great care must be taken in the selection of raw materials and the most efficient and economical processing chemicals. Under these conditions, quality synthetic detergents are a definite asset. Savings in operating costs

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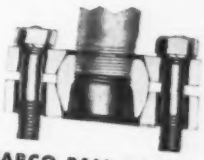
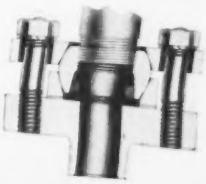
BARCO

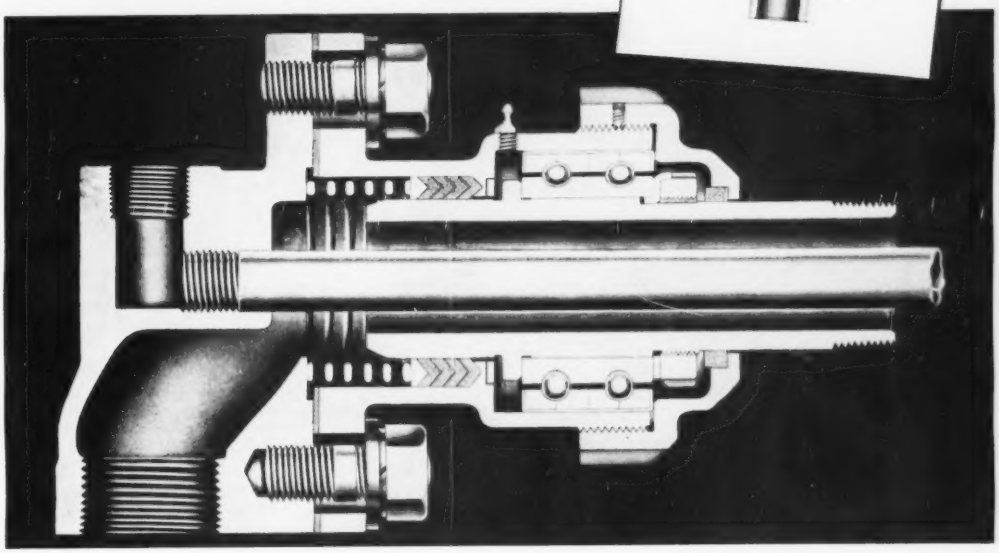
REVOLVING JOINT



BARCO BALL FLANGE

Cross-section view of Barco Ball Flange for use on threaded and flanged rolls and for correcting roll misalignment. Sleeve can rotate concentric even though threads on roll are tapped off center.





Designed especially for the Textile Industry

Barco has a lower turning torque, which reduces power costs. This revolving joint is made for all types of rotating applications such as slashers, calenders, sanforizers, and dry cans. In textile weaving and finishing plants, as well as bleacheries, Barco minimizes steam leaks, cuts maintenance worries to rockbottom levels.

For more particulars about this and other Barco Flexible Joints for the textile industry, write Barco Manufacturing Company, 1834 Winnemac Avenue, Chicago 40, Illinois. In Canada: The Holden Co., Ltd., Montreal, Canada.

BARCO FLEXIBLE JOINTS

Not just a swivel joint ...but a combination of a swivel and ball joint with rotary motion and responsive movement through every angle.

FREE ENTERPRISE—THE CORNERSTONE OF AMERICAN PROSPERITY

"MOVE IN EVERY DIRECTION"

Photograph courtesy Verney Mills

Doubling and Winding Machine

FOR WOVEN COTTON GOODS AND RAYONS

Doubles cloth neatly and evenly lengthwise so as to bring the selvages together, and at the same time measure it and wind it in a package for the market. Can be fitted to wind the doubled goods on flat cardboards, as shown, or on round paper tubes. *Ask us more about it!*

Curtis & Marble
MACHINE COMPANY
WORCESTER, MASSACHUSETTS

---

it takes GOOD BEAMS to make good warps!

PROBLEM: ORDINARY BEAMS WON'T HANDLE THE PRESSURES OF NYLON AND RUBBER YARNS!

solution . . .

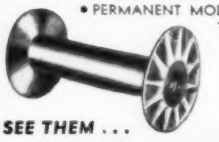
MILTON NYLON & RUBBER TRICOT BEAM

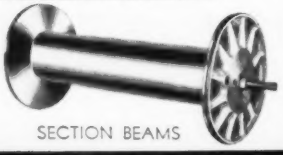
• FORGED HEADS
• RIGID BARRELS

Tested and proven under actual operating conditions, here is Milton's forged head beam designed especially to withstand extreme pressures encountered when warping tremendous yardages of monofilament; fine denier, low turn nylon; and rubber yarns! Heat-treated, aluminum alloy heads and barrels permanently joined with continuous heliarc welds. Write for complete information!

MILTON LIGHT METAL BEAMS are the result of years of close collaboration with mill production men . . .

• PERMANENT MOLD HEAD TRICOT BEAMS





SECTION BEAMS

SEE THEM . . .
BOOTH 127
KNITTING ARTS EXHIBITION

MILTON MACHINE WORKS, Inc.
DESIGNERS — ENGINEERS — MANUFACTURERS
MILTON, PENNA.

have been demonstrated by practical, long-range experiments. Versatility of the material lends itself to processing short cuts, which mean savings in time, labor, and money.

Card Clothing

(*Continued from page 135*)

wire), provides more points for carding across the card where the position more than makes up for the lack of points in the longitudinal direction. The setting, apparently, is figured out on a basis of a definite ratio between metal area and space. There is also a definite ratio between the width of the wire and the length with respect to its shape.

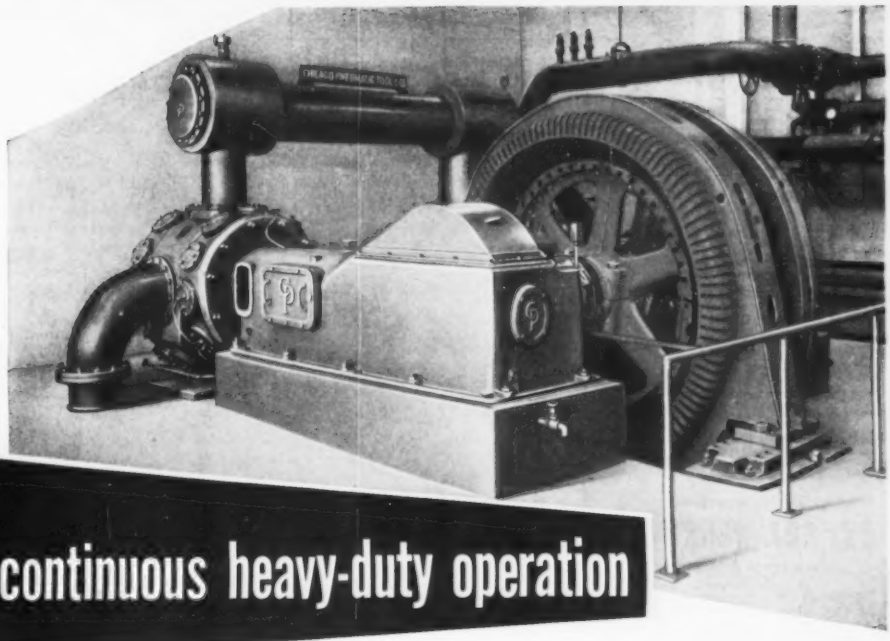
Because of the thickness or heavy gage in the longitudinal direction, the wire has great strength to stand up to the matted and tangled fibers and should hold its pitch longer. Durability is helped considerably by the type of foundation, which has a felt face to provide the necessary cushion for the wire to be resilient yet not to allow it to lose its position or pitch, such as a round or double convex wire would do under equal stress.

NO GRINDING. During the 15 months it has been operating, the cylinder has not needed grinding, and the teeth are still in good condition. The wire, of course, can be ground if and when it becomes necessary. The new clothing is supposed to last longer than standard types because the heavier gage of wire. The cushion effect of the foundation keeps the wire on pitch.

According to the Karagheusian management, only about 300 lb. of weight in clothing is needed for a cylinder. No restretching has been found necessary when the new clothing is correctly wound around the cylinder, doffers, workers, and strippers. It appeared to the writer that the open set of the wire did not damage the fiber, and the web seemed to be cleaner. One could observe that the new wire throws out a little more waste; but in the final analysis, the yield does not change because there is less stripping waste.

Production has increased because less time was lost for stripping.

DeWitt Smith Memorial Award. An award to be presented annually by Committee D13 of ASTM for outstanding achievement in the field of textile-fiber utilization has been called the Harold DeWitt Smith Memorial Medal in recognition of Dr. Smith's many contributions to the science of fiber utilization. Award is sponsored by Fabric Research Laboratories.



for continuous heavy-duty operation

O-CE COMPRESSORS

When the demand is for a continuous, economical supply of air, the CP motor-driven O-CE COMPRESSOR is unsurpassed.

Quick-acting Simplate valves minimize power consumption and provide high volumetric efficiency. Large, stream-lined air passages make air flow resistance negligible. CP Multi-Step Control handles partial load demands economically. CP Intercooler assures maximum heat transfer with low water consumption. CP Automatic Starting Unloader completely unloads compressor when starting and stopping.

The CP heavy-duty, conservatively rated Class O-CE Compressor is of the horizontal, double-acting, water-cooled type, with direct-mounted synchronous motor drive; in sizes up to 1,750 h.p., for pressures up to 5,000 pounds.

Write for full information.

CHICAGO PNEUMATIC TOOL COMPANY

General Offices: 8 East 44th Street, New York 17, N. Y.

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DIESEL ENGINES • HYDRAULIC TOOLS • VACUUM PUMPS • AVIATION ACCESSORIES

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for the
TEXTILE INDUSTRY

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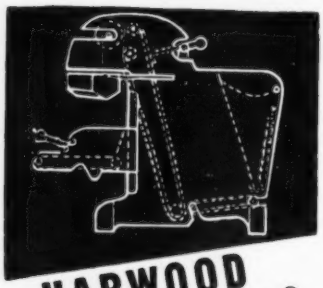
DR. ROY HERRMANN
Economist & Management Consultant
66 EAST 93rd ST., NEW YORK 28, N.Y.
Telephone: Sacramento 2-4416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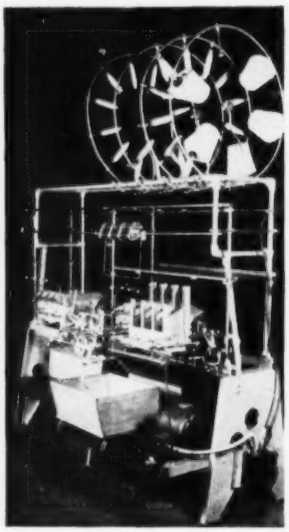
FEEDERS
Insure Maximum Uniform Feeding
Geo. S. HARWOOD & Son
Specialists in Textile Feeding Machinery Since 1863
50 LAGRANGE STREET
WORCESTER 8, MASS.

TEXTILE *Equipment* NEWS

(Continued from page 154)

operator. Both operations can be carried out while the machine is running.



SIX CONES or 12 bobbins can be placed in this new creel for bobbin winders, cutting down stops for creeling.

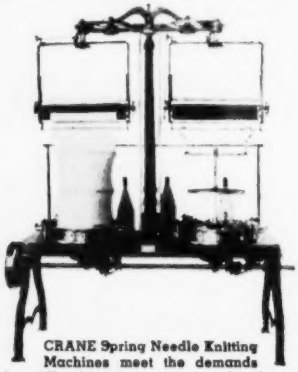
Demineralizing Unit Has High Flow Rate

A new demineralizing unit, to be known as Model 200, has been developed by Belco Industrial Equipment Div., Inc., 102 Iowa Ave., Paterson 3, N. J.

The Model 200 is said to meet re-

UP TO 60 GAL. PER HR. can be demineralized by this new packaged unit.

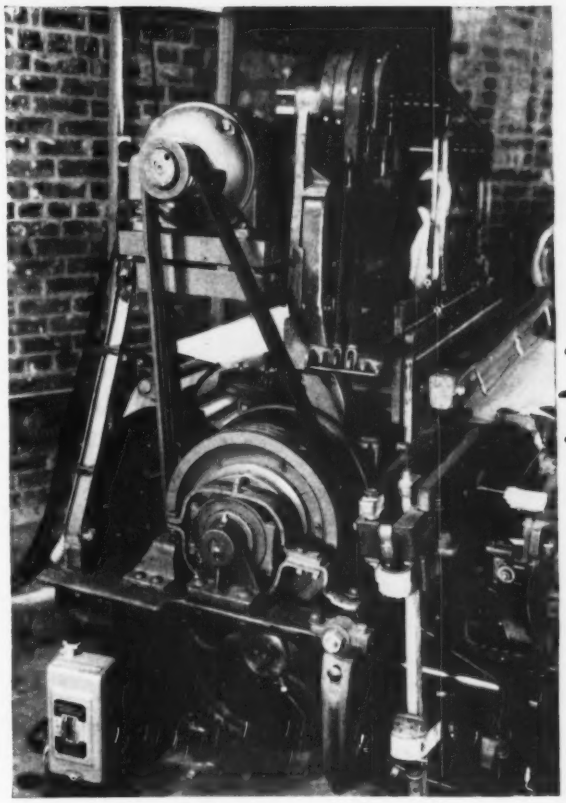
1870 **CRANE** 1949
SPRING NEEDLE KNITTING MACHINES
Speed - Quality - Low Cost



CRANE Spring Needle Knitting Machines meet the demands of rapidly changing patterns and styles on all weights of fabrics.

CRANE
MANUFACTURING CO.
LAKEPORT, N. H.

Fallspun
QUALITY YARNS
FALLS YARN MILLS
Woonsocket, R. I.
SYMBOL OF QUALITY
COAST-TO-COAST



NOW!

-SAVE POWER!
-REDUCE MAINTENANCE!
-ELIMINATE GREASE DRIP!

For vastly improved performance, modernize your looms with Dodge-Timken Bearings and the Dodge Loom Drive. For complete details consult the Dodge Transmissioneer nearest you. Write us for his name.

DODGE MANUFACTURING CORPORATION
MISHAWAKA • INDIANA

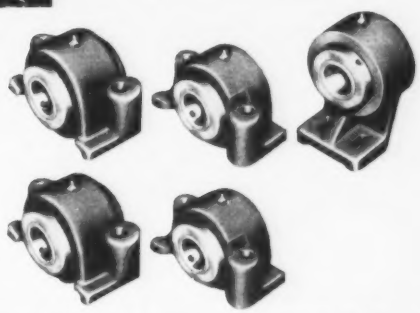
IT'S ANOTHER DODGE "FIRST"

AGAIN Dodge opens the door to improved production with important savings in cost—this time in the textile industry. Loom applications of Dodge-Timken Bearings save power, reduce maintenance by 50%, cut lubrication cost 90%, reduce vibration, eliminate crank shaft wear, stop grease drip and oil-spot spoilage.

Investigate! Learn what great results are being accomplished with the installation of these loom bearings. Also ask for details on modernizing your loom drives with the famous Rolling Grip Clutch—another Dodge "first" that contributes to better loom performance.

Dodge-Timken Bearings and the Dodge Rolling Grip Clutch are the big news in the textile field today. Use them to improve *your* operation!

DODGE...FIRST IN POWER TRANSMISSION MACHINERY!

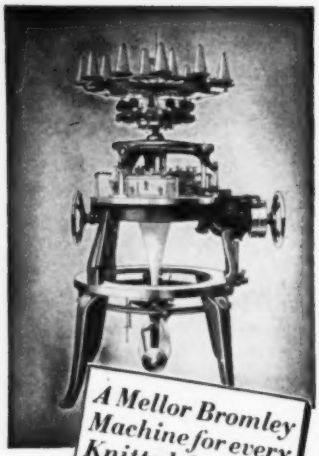


Famous Dodge-Timken Bearings—housed, sealed, ready to install and especially adapted to loom operation. Top row: loomside crank shaft bearings, left and right hand, and outboard bearing. Bottom row: cam shaft bearings, left and right hand. Take full radial and thrust loads; maintain shaft centers permanently.

DODGE

of Mishawaka, Ind.

FOR FULL DETAILS: Dodge Transmissioneers are located in all textile centers. Write us for the name of the one nearest you.



Write for descriptive leaflets of the Mellor Bromley Interlock and many other top line machines

MELLOR BROMLEY AND CO. LTD.
LEICESTER, ENGLAND

quirements for higher flow rates in a small, packaged unit having a maximum flow rate of 60 gal. per hr. and an exchange capacity of 14,000 g. as $CaCO_3$. The unit is completely self-contained and has regenerant containers concealed in the cabinet. Tanks are rubber-lined and piped with Saran piping and tubing; operating valves are Everdur.

The new model is modern in appearance, is of steel construction, and is ball-bearing caster equipped. The unit is completely assembled and loaded, ready to be connected to the raw-water line. Electronic controls are said to insure automatic shutoff when a predetermined degree of purity in the demineralized water is reached.

Tapestry & Upholstery Mills

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LAZENBY FILLING WINDERS

For Cops, Butts or Bobbins, LAZENBY has the FILLING WINDER correctly designed and equipped to handle any kind of yarn going into the shuttle, for either plain or automatic looms.

Send us a small supply of your yarn and we will wind and return with Testwind Report and Catalog.

F. A. LAZENBY & CO.
3106 Elm Ave. Baltimore, 11, Md.

DYES & CHEMICALS

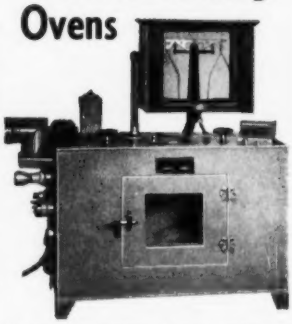
Silicone Water Repellent Has Superior Softness

DeCetex 104, a modified version of its silicone water-repellent product for fabrics, has been developed by Dow Corning Corp., Midland, Mich. DeCetex 104 is applicable when a superior softness of hand and resistance to markoff than that given by DeCetex 1107 (formerly DC 1107) is desired. The new chemical is supplied as a 60% solids solution in a non-flammable solvent.

Dow Corning's first silicone water-repellent product, DC 1107, has been renamed DeCetex 1107. The chemical is a very light straw-colored liquid having a low viscosity, practically no odor, and no acidity or alkalinity. When heated to 300° F., the liquid polymerizes quickly in and on the fibers, rendering them water repellent. The water repellency imparted by DeCetex is said to be extremely resistant to dry cleaning. On most fabrics, this finish also has good resistance to laundering, the company states.

DeCetex is applied to the fabric by padding from an aqueous emulsion to give a pickup of 2 to 4% on the original weight of the cloth. After padding, water repellency is developed by drying the fabric and heating it for 3 to 5 min. at 300 to 320° F. The addi-

Textile Testing Ovens



For *accurate* testing of water content in yarn. The 8-basket oven, with 3" x 3" baskets, may be changed to 6 baskets, 4¼" x 4¼", both 6" deep. Occupies table space 20" x 40".

EMERSON Ovens

Are built in different types to handle wool, cotton and silk. Baskets are designed specially for each class of work.

Write for details on EMERSON OVENS to fit your process.

◆

EMERSON APPARATUS CO.
177 Tremont St., Melrose 76, Mass.

QUALITY — RICHMOND — PRODUCTS

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RICHSPIN

THE OIL FOR WORSTED AND WOOL SPINNING

Scours out completely

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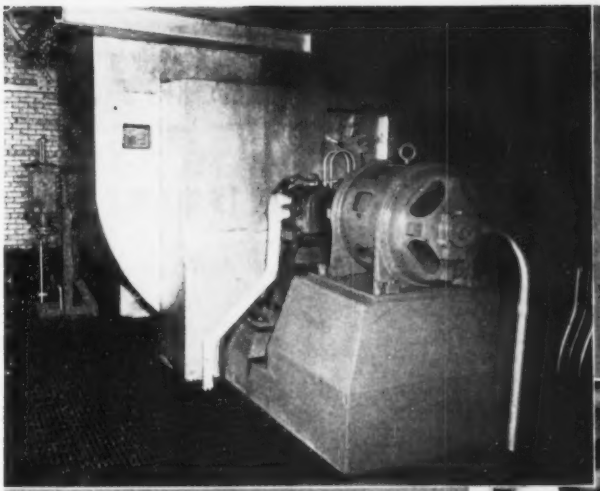
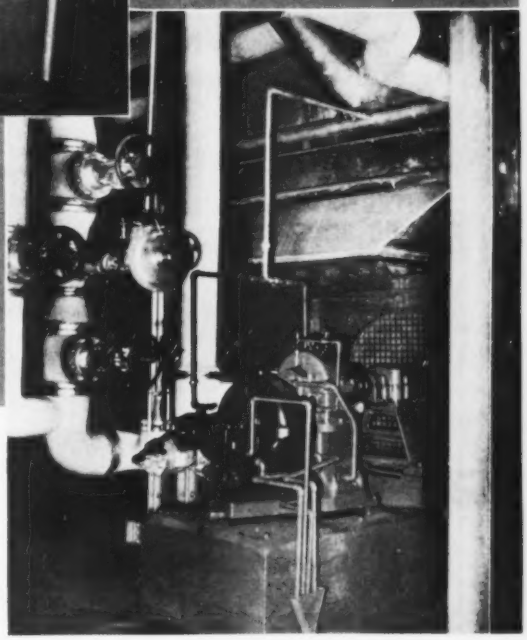


ENDURANCE *that saves you* POWER DOLLARS

is built into every "Buffalo" DRAFT FAN



Whether your boilers require forced or induced draft, you save money with "Buffalo." These ruggedly built fans not only do an efficient job of stepping up horsepower, but you have fewer time-outs for repair — fewer time-outs that hold up vital plant functions. This endurance comes from HEAVY construction in all fan parts that wear out — blades, shafts, bearings. A BIG way to save money in your plant is to start with power costs — using "Buffalo" Draft Fans, the kind with inbuilt staying power!

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Bulletins 3113-B and 3190-B give money-saving facts on both induced and forced draft fans. Write for your copies!

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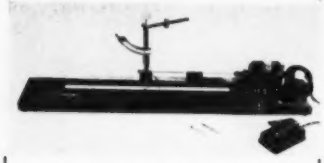
VENTILATING FORCED DRAFT | AIR WASHING COOLING | AIR TEMPERING HEATING | INDUCED DRAFT EXHAUSTING PRESSURE BLOWING

PRECISION TWIST TESTERS



For Determining Turns per Inch in Continuous Filament or Spun Singles and Ply Yarns

For Determining Take-Up Due to Twist in Filament and all Types of Plied Yarns

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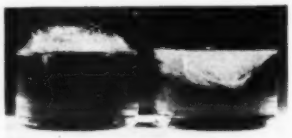
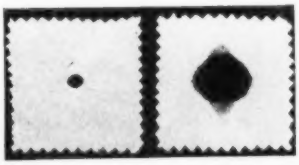
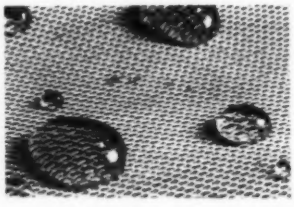
WATER ON NYLON treated with DeCetex has an excellent contact angle of water.



FIBER MIXTURE made up of DeCetex-treated viscose and acetate fibers floats (left) while untreated mixture sinks after a 30-sec. contact.



RESISTANCE TO INK of the washable type is demonstrated by a DeCetex-treated sample (left) in comparison with an untreated sample.



CONTACT ANGLE of water on treated viscose marquisette is excellent.

tional steps of washing and neutralizing often required with water repellents are not necessary because the emulsion is neutral.

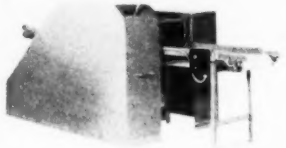
Silicone water repellent has proved to be effective on silk, wool, viscose, acetate, cotton, nylon, and glass fabrics in a wide variety of weaves and weights.

Mill trials have demonstrated the effectiveness of DeCetex on nylon, the company states. Samples of nylon to which DeCetex has been applied in a concentration of 2.0 to 2.5% are said to have a spray rating of 100 after three dry cleanings, and maintain a rating of 90 after at least six successive cleanings. The same samples

TO CUT RAMIE FIBER

—into staple lengths for spun ramie, use

TAYLOR-STILES NO. 15 "LITTLE GIANT"



Other Taylor-Stiles Cutters for cutting waste, rags for shoddy, or any non-continuous fiber and continuous filament yarns.

Taylor-Stiles Cutters are used by ramie and other textile manufacturers.

Write for descriptive literature, specifications and price.

TAYLOR-STILES Company
CUTTING MACHINES & KNIVES

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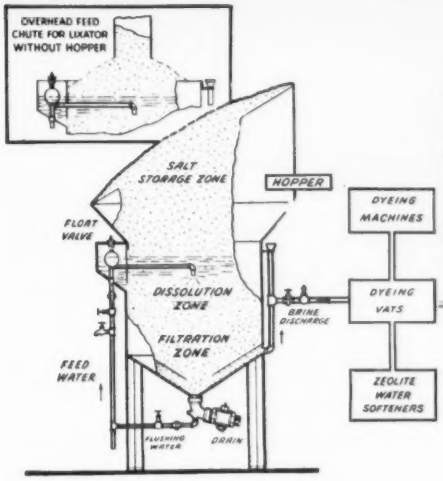
The LIXATE pipe line to efficient brine distribution



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In the dissolution zone—Flowing through a bed of Sterling Rock Salt which is continuously replenished by gravity feed, water dissolves salt to form 100% saturated brine. In the filtration zone—through the use of the self-filtration principle originated by International, the saturated brine is thoroughly filtered through a bed of undissolved rock salt. The rock salt itself filters the brine. Nothing else is needed.

THE LIXATOR *automatically* provides 100% saturated crystal-clear, self-filtered brine that can be piped, by gravity or pump, anywhere . . . at any distance . . . it is needed in your plant.

JUST TURN A VALVE for Lixate Brine that meets the most exacting standards for chemical and bacterial purity . . . that can be diluted volumetrically to any desired strength.

THE LIXATE PROCESS for Making Brine cuts production costs as high as 20% . . . by cutting labor, time and waste in making brine. No hauling, measuring, stirring . . . YET ALWAYS a continuous supply of *accurately measured* brine.

Consult our Technical Service Department on your use of salt and brine. The experienced men on this staff will advise you on the proper location for Lixator and salt storage, pumping arrangements, types of pumps, meters, and valves. They will fit the *money-saving* Lixator into your plant operations. Write today!

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The New Stainless Steel
STERLING MODEL LIXATOR
For "Lifetime" Use
For Greater Economy
For Added Cleanliness

The **LIXATE** *Process*
REG U S PAT OFF
for making brine
INTERNATIONAL SALT COMPANY, INC.
Scranton, Pa.

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Cuts Handling Costs *IN HALF!*

Works All Day for 11¢*

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No wonder Transporter astounded management with its new, low-cost way to cut handling costs thousands of dollars. And it does it for as little as **11c-a-day battery charging cost,* maintenance and replacement no item at all. Industry-tested and proved, thousands and thousands are in daily operation. Mail coupon for FREE CATALOG of money-saving facts.

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showed a spray rating of 90 after six launderings.

The application of silicone water repellent to nylon is said to have an additional advantage that the fiber can be made water repellent and thermoset in a single operation. A fabric having excellent water repellency, a soft full hand, and good dimensional stability are said to result.

Both DeCetex 1107 and DeCetex 104 can be emulsified with a very-high-speed mixer or colloid mill.

Synthetic Detergent Is Economical To Use

Sulframin E, a modified alkyl aryl liquid synthetic detergent, has been developed by Ultra Chemical Works, Paterson, N. J. The detergent is said to have exceptional hard-water and lime-soap stability as well as excellent foaming, wetting, and detergent qualities. The agent is very stable and more effective in the presence of acids and alkalies than other alkyl aryl sulphonates, the manufacturer states.

Sulframin E, prepared as a clear amber-colored liquid, is available in drums, tankwagons, and tank cars.

Useful ACCESSORIES *for the* TEXTILE MILL

Bubbler Meter

Gas or liquid purge rates can be measured in familiar flow units by a new purge-service flowmeter designed by Fischer and Porter Co., Hatboro, Pa. This bubbler-type meter is an adaptation of the Flowrator instrument that includes a built-in needle valve for close control of purge rates. The new meter can be used with liquid-level, fluid-flow, and specific-gravity measuring instruments.

Portable Checkroom

Checkerette, a versatile rack unit designed to meet the need for a sturdy but portable clothes rack, has been announced by Vogel-Peterson Co., Chicago 5, Ill. It comes with 16 double hooks which are so designed that they can be removed and coat hangers substituted in their place. The unit has an adjustable hat shelf and can be assembled without nuts, bolts, or tools in a minute.

Lubricating-Oil Testing Kit

An oil-testing set for quick measurements of the condition of lubricating oil has been developed by The Gerin Corp., Red Bank, N. J. The portable kit measures changes in viscosity, amount of oil deterioration substances, amount of dirt, and acidity. Oil from four engines can be analyzed for all four classes of contaminants in 25 min., the company states. The outfit is recommended for use by engine attendants in power plants as well as for mechanics in garages.

Combination Hammer and Drill

Drilling holes in concrete and masonry floors, walls, and ceilings can be speeded up by the use of the Do-All combination electric hammer and drill made by Wodack Electric Tool Corp., 4627 W. Huron St., Chicago 44, Ill. Drilling concrete with this tool is said to be 12 to 15 times faster than with hand tools. Drilling range in concrete is ¼ to 1½ in. The tool can be changed from a hammer to a drill simply by loosening the connection and removing the hammer member. Capacity of the drill is ⅜ in. in metal. The drill may also be used as a portable grinder, and a stand is available for mounting it for bench drilling and grinding. Star drills for the hammer are available in 20 diameters and for holes up to 24 in. deep.

Gram-atic Balance

An entirely different analytical weighing instrument has been developed by Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa. A direct-reading analytical balance, it is a one-pan, two-knife-edged device which utilizes a constant-loading mechanism to eliminate handling of weights. Accurate weighing of specimens from 0.1 g. to 199.9 g. is said to be possible in one-third the usual time.

Paint Primer

A paint primer developed to eliminate the necessity of having to remove all rust or of having a surface perfectly dry before painting has been announced by The Wilbur & Williams Co., Greenleaf & Leon Sts., Boston 15, Mass. Called Rust-O-Primer, the combination chemical pretreatment and primer has a vinyl base. It is applicable over wet or dry, clean or rusted metal including steel, aluminum, or galvanized surfaces.

Quick Exhaust Valve

A newly designed quick-exhaust valve in which fluid pressure automatically opens the exhaust port to the atmosphere when the main control valve is returned to the normal position has been developed by Airmatic Valve, Inc., 1643 East 40th St., Cleveland, Ohio. The valving action is operated by a fluid through two poppet elements, eliminating the fluid return through long piping to the main operating control valve. Available for air, oil, and water at pressures from 0- to 200-psi.

Vibration Mounting

Holder-type mountings in a new line designed to isolate vibration and control severe shock have been announced by

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Lord Mfg. Co., Erie, Pa. Recessing under equipment is said to be no longer required. Load capacity is from 120 to 310 lb. per mount. The flexing element is made of rubber or oil-resistant Neoprene. Mountings are available in series having deflection limits of $\frac{1}{4}$, $\frac{3}{8}$, and $\frac{1}{2}$ in.

Palletless Handling Attachment

A box-clamp attachment for use with their Model 20 lift truck has been announced by Hyster Co., Portland 8, Ore. Adaptable to the standard Load-Grab as optional equipment, it includes box-clamp arms for grasping the load, sliding support assemblies, and an overhead stabilizer bar. The box handler will carry loads up to 1,780 lb. Clamp arms spread from 25 to 62 in. and may be lowered to ground level.

Photomicrographic Equipment

A new development in photomicrography has been announced by Bausch & Lomb Optical Co., Rochester 2, N. Y. Called the Model L, the equipment consists of a basic unit plus the accessories required to meet specific problems. Different illuminating and lens equipment and stages are available for transparent and opaque specimens at both high and low powers. The camera itself is 5x7 in. The entire assembly is designed for medium-sized requirements in this type of work.

Explosion-Proof Control Equipment

A motor-control assembly which is explosion-proof, weatherproof, watertight, and dustproof has been developed by Electro Mechanical Devices Co., 49 Selden St., Detroit 1, Mich. The assembly includes junction boxes, sealed fittings, and combination starters. The installation is free standing but may be designed for wall mounting. Simplification of construction is claimed to eliminate complex problems of design, purchasing, and installation in hazardous locations.

Floor-to-Floor Conveyors

An inclined floor-to-floor conveyor which can be installed in two hours has been developed by Sage Equipment Co., 30 Essex St., Buffalo 13, N. Y. Slider-bed type construction is featured complete with a nosed-over delivery and a power-driven tail feeder. Standard units are built with a three-ply, rubber-covered duck belt which comes 8 to 24 in. wide. The conveyor is furnished complete with a gear-head motor and 25 ft. of rubber-covered cord.

Air Starting Motors

Air motors for starting internal-combustion engines are now being produced by Ingersoll-Rand Co., 11 Broadway, New York 4, N. Y. The air motor is keyed or splined to the Bendix or starting mechanism, and the engine is cranked in the same manner as an automobile engine. Two sizes are available: 9 and 20 hp. at 90 psi. air pressure. A single-step spur gearing is used to obtain suitable speeds.

Low-Pressure Conduit Clamp

A different type of low-pressure clamp for use with flexible conduits has been introduced by Flexible Tubing Corp., Branford, Conn. The new clamp is said to provide positive clamping action over diameters from $1\frac{1}{2}$ to 37 in. No tools are required for set-up or release. An overlapping, one-piece, non-rusting metal clamping band is combined with a strap and buckle take-up in the device.

Wire-Control and Straightener Unit

An improved unit for use with its line of metallizing guns has been announced by Metallizing Engineering Co., Inc., 38-14 30th St., Long Island City 1, N. Y. This wire-control and straightener unit is said to unreel wire in the proper direction and to remove curvature from any type or any size metallizing wire, regardless of stiffness. The device is adaptable to mounting on automatic set-ups, or on a bench. All adjustable parts are equipped with thumb screws.

Concrete-Floor Patch

A new product, Tampatch, for high-speed repair of concrete floors, has been developed by United Laboratories, Inc., 16801 Euclid Ave., Cleveland 12, Ohio. The product can be applied to broken, rough, or uneven concrete surfaces, exterior or interior. It is claimed that the floor may be put in service almost immediately after the repair, and that it can withstand heavy traffic loads. The patching material is delivered in ready-mixed form.

Versatile Drum Pump

A drum pump which handles heavy grease or light fluids has been announced by General Scientific Equipment Co., 2700 West Huntingdon St., Philadelphia 32, Pa. A special spider design of the piston and intake opening provides a cut-through action and large capacity which handles any fluid which seeks its own level, except lacquer thinners. Heavy greases can be pumped at rates up to 3 gal. per min. The fitting is for both 2- and $1\frac{1}{4}$-in. barrel openings on 15-, 30-, and 60-gal. drums.

Blacklight Lamps

A line of low-pressure, mercury-arc lamps for use in fluorescent-pigment and materials work has been developed by George W. Gates & Co., Inc., Franklin Sq., L. I., N. Y. The lamps furnish a source of long-wave ultraviolet or "black" light filtered to remove all but a trace of visible light. Comparisons, determinations, and detections are said to be easily solved. Lamps are available in wattages from 4 to 30 and lengths from 6 to 36 in.

Tape-Drive Cabinet Dial Unit

A dial attachment for use with several types of scales has been announced by The Howe Scale Co., Rutland, Vt. The new tape drive is a positive-drive mechanism which replaces the old-style rack and pinion. This development is said to elimi-

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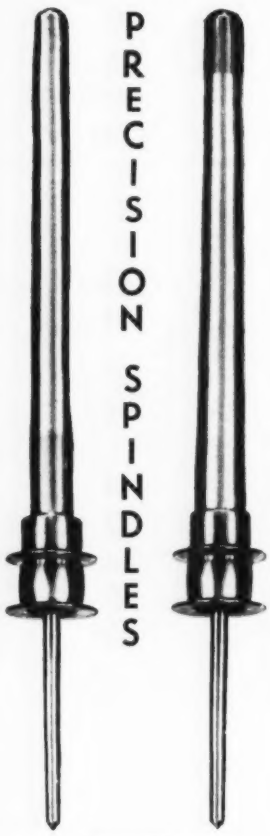

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nate inaccuracies caused by gear-tooth wear, backlash, and friction. A multiple drop-weight system of weight addition is utilized to change the scale capacity. The unit is for use in heavy, medium, and light-duty industrial weighing.

New Type Wheel Brush

Development of a wheel brush which is said to be easier to install and more economical to replace has been announced by Fuller Brush Co., Hartford 2, Conn. In this brush, the adapters are built into the side plates. The combination adapter-side plates are not integral with the brush section—thus only the brush unit need be replaced. Shaft sizes from ½ to 1 in. can be fitted. The brush is 1 in. wide and is available in diameters from 5 to 9 in. in a choice of three materials.

Steam Generator

A complete steam plant which is said to combine efficiency with portability has been announced by C. H. Dutton Co., Kalamazoo, Mich. The unit comes assembled and ready to run. Horsepowers of 20, 40, 60, 100, and 160 are available. The steam automatic generator features rotary combustion and operation. An overall operating efficiency of 80% is claimed.

Temperature and Pressure Recorders

A new line of gas-filled temperature recorders and recording pressure gages has been announced by Penn Industrial Equipment Corp., 3116 North 17th St., Philadelphia 32, Pa. The recorders are available with 1, 2, 3, or 4 pens for easy field installation. The standard bulb design is arranged for conversion into any of the usual apparatus connections. All recorders are guaranteed for two years.

Method for Item Breakdown

A patented method of breaking down any list of items by item without rewriting has been developed by Ditto, Inc., 2243 West Harrison St., Chicago, 12, Ill. A set of overlapped strips are run through a duplicating machine and are then torn apart for use as desired. The method is suitable for inventory control, stock-taking, labor tickets, catalog preparation, etc.

Mill Maintenance

Good Battery Maintenance Keeps Lift Truck Operating

The use of electric fork trucks and motorized hand trucks by mills has introduced a new maintenance problem: that of taking care of the batteries that run the equipment. According to Gould Storage Battery Corp., the two main causes of battery failures are:

1. Improper charging of the battery.
2. Failure to repair damaged cells.

If the battery is not given sufficient charge after each discharge, the duty cycle will be reduced. Charging an overdischarged battery requires increased charging time that may disrupt the charging system.

A damage cell, of course, lowers the efficiency of the battery by reducing the effective voltage. Loss of power and speed results, and additional strain is placed on the remaining good cells.

The best battery maintenance is preventive maintenance, and the best system for keeping a close check on batteries is a daily inspection and recording of battery conditions. A system similar to the following is effective:

1. Number each battery in use and in stock.
2. When a battery is installed, record the time of installation, the truck number, and the specific gravity and temperature of the battery.
3. When a battery is taken out of a truck to be charged, record the specific gravity and temperature, the time, the setting of the ampere-hour meter, and whether the evaporated fluid was replaced.

This information can be used to determine the period of time that a battery should be used. Such a determination can avoid overworked batteries that lower the efficiency of the trucks or result in lost time of the trucks.

The record also gives means for checking on the efficiency of battery charging, which guards against failure. If the temperature reading is high, indicating that charge rates are too high, the trouble may be caused by damaged cells that prevent the battery (and truck) from doing a day's work.

Experience has shown that production men do not take good care of equipment. Their prime interest is production; and if a choice must be made between good production and good maintenance, the choice will be in favor of production.

Battery maintenance, therefore, should not be left to production men. A careful choice should be made to assign battery maintenance to a qualified man who will keep adequate records and will maintain clean, properly charged, properly operating batteries.

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The Damp-Tex system of painting kills rust, rot, fungus and bacteria. Stops deterioration. Can be applied on any paintable surface, *wet* or dry, with equal ease and efficiency... changing dingy, rough light-blotter interiors into glistening porcelain-like beauty. One coat covers. Resists acid, alkali, corrosive gases and oxidation. Dries overnight without flavor-tainting odor into waterproof film. Comes in white and colors. Write for our trial offer.

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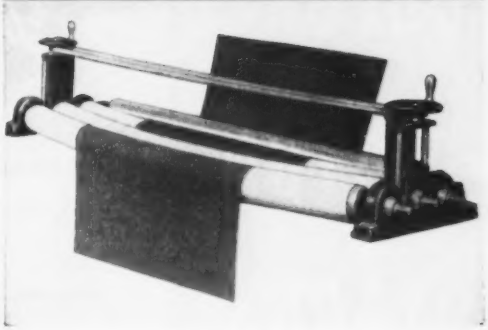

You Can CONTROL

the Widthwise Stretch of your Cloth

with this Device

This expander mounting provides a quick and easy means of adjusting the amount of widthwise stretch in your cloth from maximum to minimum. Essential on machines handling more than one grade of goods with different stretching requirements.

Shown herewith are 3 "Free-Wheeling" Expanders and 1 four inch diameter brass lead-on roll, all mounted in the same bracket—the middle expander being vertically adjustable by means of hand wheels. Additional adjustment is also possible by rotating the expander axles in ball and socket brackets. If still greater range of adjustment is required, the unit can be furnished with 5 expanders, 2 of which are vertically adjustable.

The hand wheels for vertical adjustment are connected by a roller chain enclosed in tubes, welded to the frame, to protect the chain from damage and prevent soilage of cloth.

When various grades of cloth, both easy and hard to stretch, are frequently handled, this type of expander mounting is very useful.

Bulletin E.C. on request.

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Books of Interest

From Legend to Science In Bleaching Practices

AN INTRODUCTION TO TEXTILE BLEACHING by J. T. Marsh; John Wiley & Sons, Inc., 440 4th Ave., New York, N.Y.; 512 pages, $6.50.

The author recognizes that prior to about 1914 good bleaching was done; but it was by handed-down, rule-of-thumb methods rather than by scientifically founded formulas. The principles on which these long-recognized practices rested have not been clarified until comparatively recent times. Scientific investigations have proved the validity of most of the legendary bleaching methods, but finishers as a whole clearly have something to learn from pure science even though pure science alone may not be adequate to solve some of the practical bleaching problems. The accumulated experience of both scientific and industrial practice is recorded in this volume with the object of clarifying the present "state of the art" and making improvement in process and product more logically possible. "Understanding", says Mr. Marsh, "is the necessary first step in proceeding from the known to the unknown."

The book takes up the characteristics of the basic textile fibers which are involved in the scouring and bleaching processes, then the principles and phenomena of wetting and detergency, and finally the scouring and bleaching of cellulosic fibers and of animal fibers. There is a chapter on drying and on tests for damage. A good bibliography follows the appendix. There are 154 illustrations of machines, and methods and charts of properties or reactions. Naturally, much space is devoted to the hypochlorite bleach and the peroxide bleach for cotton, but operations are based on the batch system, and kiers are the principle machines. Continuous processing is handled as an addition, but the principal arrangements are all given coverage.

Although some of the principles described in analysis of the chemical and physical reactions in detergency, bleaching, washing, and drying are still only part of their story, the volume is serviceable for any finisher and provocative of thought. Science, of course, is not standing still while books are being written. This volume does a good job of bringing the reader up to date as of the end of the war on bleaching theories and techniques. This alone is a worthwhile achievement and bears out the title "An Introduction to Textile Bleaching."

The Converter's Importance To Cotton Goods

COTTON IN THE CONVERTING INDUSTRY, by F. A. McCord and A. Steinbach, Jr.; Nation Cotton Council of America, Memphis, Tenn.; 24 pages.

Converters, as merchandisers of fabrics, exercise an important influence on the distribution and use of cotton fabrics, particularly in fine cotton goods, according to information recognized in the field and confirmed in the report recently released by the National Cotton Council. More than 3,250,000,000 linear yards of cotton fabrics, the report estimates, passed through the hands of converters in 1947. There is discussion of the integrated converter and the independent converter.

In addition to detailed information on functions of converters and their influence on the merchandising of cotton fabrics, the report summarizes opinions of converters on cotton's advantages in finishing and its advantages to ultimate consumers. The report contains a number of converter suggestions for additional research and promotional work in behalf of cotton. It presents a discussion of prices, trends in fabric uses, and the significance of high-style cottons.

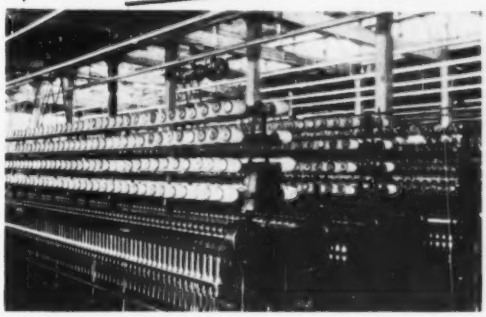
Other Books of Interest

AN OUTLINE OF ART STUDY, by Cyril Sloane, of Brooklyn Museum Art School; The William-Frederick Press, 313 W. 35th St., New York 1, N. Y.; 16 pages, 50c; quick surveys of fundamentals in drawing, perspective, color, design, organization, etc.

REPORTS OF TEXTILES COMMITTEE OF ILO—Four volumes, "Record of First Session," "General Report," "Employment Problems with Special Reference to Recruitment and Training," "Industrial Relations"; International Labor Office, Geneva, Switzerland; 574 pages over-all, $3.75 for set.

SUMMARIES OF TARIFF INFORMATION—Vol. 12, Silk Manufacturers, 50 pages; Vol. 13, Manufacturers of Rayon or Other Synthetic Textile, 118 pages; U. S. Tariff Commission, Washington 25, D. C.

Troubled with broken ends and blackened yarns?



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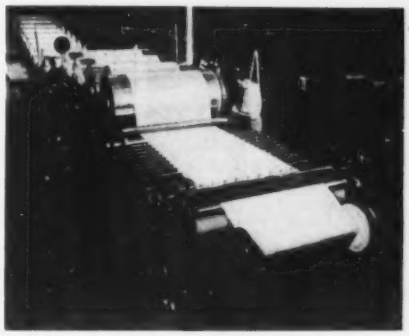

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James H. Carver, Box 22, Rutherfordton, N. C.

News of the month

Greenville Show in October, 1950. The 16th Southern Textile Exposition will be held Oct. 2 to 7, 1950, in Greenville, S. C., according to statement by William G. Sirrine, president of the Textile Hall Corp. A letter to exhibitors asks for comments on earlier closing hours. Suggestions already received favor closing the show at 7 p.m. during the week, and at 1 p.m. on Saturday.

Move to Promote Wool. Organizations representing four countries producing over two-thirds of the world's apparel wool have joined in an effort to increase the usefulness and the markets for wool in the United States and Canada through a broad scale program of research, education, and promotion. The cooperating agencies are the Wool Boards in Australia, South Africa and New Zealand, the International Wool Secretariat. The new organization, which will be known as The Wool Bureau, Inc., will conduct a long-term program of technological and market research, education, trade surveys, and promotion. The bureau, with principal offices in New York, will function as a nonprofit membership corporation.

New England and Textiles. At a recent textile conference, Governor Dever of Massachusetts said he was considering the use of public funds for an intensive investigation of the textile industry, including its banking practices. The situation is getting worse, said the governor, and no one would allege that the entire fault was due to reciprocal trade agreements or to foreign competition. Mayor James Meehan, of Lawrence Mass., suggested Congress be asked to adopt a safety clause in the new reciprocal trade agreements to shut off imports if they were to hurt domestic production. Kenneth W. Marriner, Boston wool executive, urged that an independent agency outside the State Department handle reciprocal trade agreements. Edwin Wilkinson, of the National

Textile Calendar

National Knitted Outerwear Association, annual meeting, Waldorf-Astoria Hotel, New York, Apr. 7, 1949.

American Institute of Electrical Engineers, electronic conference, Statler Hotel, Buffalo, N. Y., Apr. 11 and 12, 1949.

National Assn. of Wool Mfrs., annual meeting, Waldorf-Astoria, New York, April 13 to 14, 1949.

Alabama Cotton Manufacturers Association, annual meeting, Hotel Buena Vista, Biloxi, Miss., Apr. 14 to 16, 1949.

STA, Northern N.C.-Virginia Div., regular meeting, Spray, N. C.— Apr. 16, 1949.

STA, Eastern Carolina Div., regular meeting, Raleigh, N. C., Apr. 23, 1949.

Southern Machinery & Metals Exposition, Atlanta, Ga., April 25 to 28, 1949.

Knitting Arts Exhibition, Atlantic City, N. J., Apr. 25 to 29, 1949.

National Association of Hosiery Manufacturers; annual meeting, Hotel Claridge, Atlantic City, N. J., Apr. 25, 1949.

Annual Hosiery Industry Conference, Hotel Claridge, Atlantic City, N. J., Apr. 25 and 26, 1949.

Third Annual International Textile Industries' Exposition, Grand Central Palace, New York, N. Y., May 2 to 7, 1949.

AIEE conference on textile industry, MIT, Cambridge, Mass., May 3, 1949.

British Industries Fair, Birmingham, England, May 2 to 13, 1949.

Cotton Manufacturers Association of Georgia, 49th annual meeting, Sheraton Plaza and Princess Issena Hotels, Daytona Beach, Fla., May 4 to 6, 1949.

Phi Psi Textile Fraternity, annual convention, Biltmore Hotel, Atlanta, Ga., May 6 and 7, 1949.

Swiss Industries Fair, Basle, Switzerland, May 7 to 17, 1949.

National Cotton Week, May 9 to 14, 1949.

National Packaging Exposition, 18th Annual Show Auditorium, Atlantic City, N. J., May 10 to 13, 1949.

Carolina Yarn Association, annual outing, Carolina Hotel, Pinehurst, N. C., May 12 to 14, 1949.

Tufted Textile Manufacturers Association, annual meeting, Atlanta Biltmore Hotel, Atlanta, Ga., May 26 to 28, 1949.

Philadelphia Textile Institute Alumni Association, 48th annual outing, Oreland, Pa., June 3, 1949.

Textile Wet Processing Equipment & Supplies Exposition, 71st Regiment Armory, New York, N. Y., June 6 to 10, 1949.

STA, annual meeting, Mayview Manor, Blowing Rock, N. C., June 16 to 18, 1949.

AATCC, Piedmont Sect., Ocean Forest Hotel, Myrtle Beach, S. C., June 24 to 26, 1949.

American Society for Testing Materials, annual meeting, Atlantic City, N. J., June 27 to July 1, 1949.

American Society for Testing Materials, first West Coast meeting, Fairmont Hotel, San Francisco, Calif., Oct. 10 to 14, 1949.

Textile Machinery Exhibition, Manchester, England, Oct. 12 to 22, 1949.

American Association of Textile Chemists & Colorists, annual meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., Oct. 13 to 15, 1949.

Cotton Textile Institute, annual meeting, New York, Nov. 3, 1949.

AATCC, Piedmont Sect., Charlotte Hotel, Charlotte, N. C., Nov. 5, 1949.

American Textile Machinery Exhibition (and Allied Industries) sponsored by National Association of Textile Machinery Manufacturers, Atlantic City Auditorium, Atlantic City, N. J., May 8 to 12, 1950.

Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 2 to 7, 1950.

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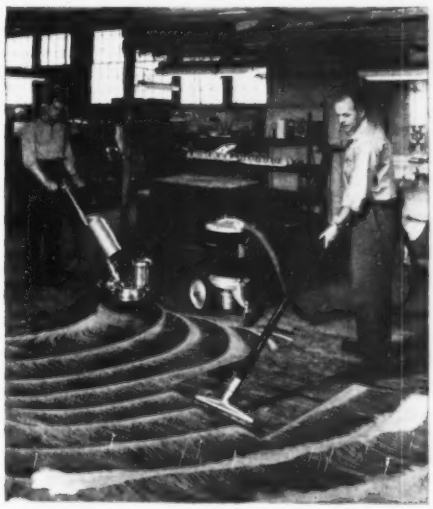

THE KENT FAST-CLEANING TEAM IN ACTION

Pictured on the left is the KENT Floor Scrubbing Machine for fast cleaning of all types of floors. On the right is the KENT Electric Mopper for picking up dirty scrub water quickly, completely—even out of cracks and crevices. Makes floors dry rapidly! It can be converted for picking up dry dirt too!

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- **EASY TO CLEAN**
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Stainless steel body, cleans quickly
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Truck tilts on center casters for easy maneuvering
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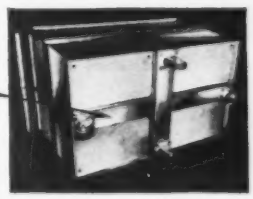

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Counts each hose
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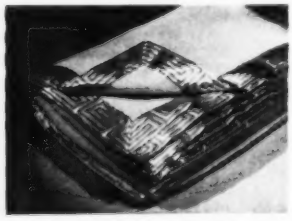
Association of Wool Manufacturers, emphasized that in April, 1948, the average weekly wage of British textile workers was between 30 and 40¢ an hour, while that in the United States was $1.31 an hour. The results of competition were obvious.

AATCC Annual in Atlantic City. The committee for the 1949 convention of American Association of Textile Chemists & Colorists has been organized and preliminary planning has been started, according to Walter F. Fancourt, 3rd, of W. F. Fancourt Co., general convention chairman. The Philadelphia Section, AATCC, will be host for the three-day meeting scheduled for Oct. 13, 14, and 15 at Chalfonte-Haddon Hall, Atlantic City, N. J. Ernest E. Rettberg, Jr., Scholler Brothers, Inc., has been named assistant general chairman.

Knitted Outerwear Men to Meet. Effect of retail policies, of trends in the primary wool market, and of the economy in general upon the knitted outerwear industry will be discussed at the 31st annual convention luncheon of the National Knitted Outerwear Association on Apr. 7 at the Waldorf-Astoria, New York. Speakers at the luncheon will include Irwin Wolf, vice president of Kaufman Department Stores, Pittsburgh, and chairman of Vendors Relations Committee of NRDGA; John G. Wright, president of Boston Wool Trade Association; Edwin B. George, economist for Dun & Bradstreet, Inc.; and Joseph Lorin, vice president of Grey Advertising Agency, Inc. The banquet will be held in the evening of Apr. 7 with attendance of over 1,600 expected.

Kenaf, New Fiber Crop. Kenaf, a fiber crop new to the Western Hemisphere, is now being grown successfully in Cuba and El Salvador as a result of collaborative work between agricultural scientists of the United States and Latin American countries, the U. S. Department of Agriculture reports. The newly offered fiber promises to be of unusual value. It is called an effective substitute for jute, which normally is imported from India and Pakistan. Jute, during recent years, has been in increasingly short supply because of conditions in the producing areas of India and Pakistan, a major one being that more of their land is going into food crops. Kenaf is a fast-growing bast fiber, original home of which is India. It has been found fully competitive to jute fiber in yield, cost, and strength.

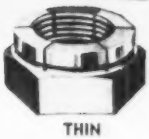


ST. MARY'S WOOLEN MFG. CO. offers a new element in blanket design when it binds its de luxe $50 retailer on all four sides with satin tape printed with a Greek design in metallic gold. The blanket itself is white.

ERP AIDS ROUBAIX-TOURCOING WOOL DISTRICT—David K. E. Bruce (left), chief of the Economic Cooperation Administration Mission in France, is shown in Etablissements Prouvost, Roubaix, inspecting a high-speed Warner & Swasey gill-box, one of the textile machines recently received through Marshall Plan aid. Beside him is Jean Prouvost.

American Technician Lectures Abroad. "Industrial Applications of Stress-Strain Relationships" will be the title of a paper to be presented by Dr. Walter J. Hamburger, director, Fabric Research Laboratories, Inc., Boston, Mass., before the annual conference of the Textile Institute (British) to be held in Dublin, Ireland, May 24 to 27, 1949. Prior to that conference, Dr. Hamburger plans to spend a number of weeks in Great Britain, France, Holland, Belgium, and the Scandinavian countries. He has been invited to lecture at the Swedish Institute for Textile Research in Gothenburg, Sweden; The Fiber Research Institute in Delft, Holland; and Leeds University, Leeds, England.

Warn Growers Against Grease Weight Sales. Western wool growers are being advised by agricultural specialists not to sell their wool ahead this season on a contracted grease-weight price



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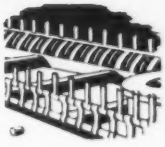

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may sound like an impossibility, but fast-acting, built-for-the-job Oakite material goes to work in kettles . . . softens up sizing for thorough removal by pressure rinsing. For complete details get helpful digest offered in coupon.

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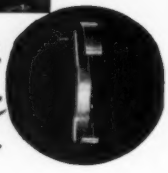

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U. S. "Special Bronze" Twisters are something truly different and better for wet twisting. This alloy is toughter, more resistant to the peculiar conditions of wet friction—and often GIVE 20 to 35% GREATER LIFE than the ordinary bronze travelers of just a few years ago. Use these MODERN travelers for MAXIMUM service.

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123 Treaty Rd., Drexel Hill, Pa. Phone Hilltop 2946
H. R. Fisher, Concord, N. C. Box 83-Phone 8366
C. W. Smith, H. J. Smith, Providence,
Box 1187 Gaspee 0100

because it is argued that the deep snow cover over the soil of the western ranges will keep out a great deal of sand and dirt that usually gets into the wool. These specialists believe the domestic clip will run much lighter in shrinkage than usual this spring, and that growers should sell on basis of clean wool yield.

Impressive Style Show for Carpets. A carpet style show on the lines of a garment style show was staged at the opening of the carpet season late in February at the Ziegfeld Theater, New York, by the Carpet Institute. It was more elaborate than most garment shows, having specially written music, lyrics, and dialogue with a professional cast of actors and dancers. Three principal carpet groups were promoted: (1) axminsters, mostly in floral patterns; (2) single-color rugs in plain or two-toned effects; (3) carved or sculptured carpets.

Textile Research Conference. The Gordon Research Conference on Textiles will be held during the week of July 18 at Colby Junior College, New London, N. H., under the sponsorship of the American Association on the Advancement of Science. J. H. Dillon is chairman of the conference and Earl E. Berkley is vice chairman. The program follows: July 18—H. Mark, Principles for the Selection of Fiber-Forming Materials; R. C. Houtz, Orlon Acrylic Fiber: Chemistry and Properties. July 19—Milton Harris, The Nature of the Felting Phenomenon and of Some Anti-Felt Treatments; E. L. Skau, A Calorimetric Investigation of the Cellulose-Water Relationships in Textile Fibers. July 20—William Utermohlen, Detergency Studies; T. E. Morton, Dyeing of Cellulose Considered as a Diffusion Process. July 21—J. W. Rowen, Some Infrared Studies on Cellulosic Compounds; Joseph Brant, Discussion of Crease-Resistant Treatments of Fine Cotton Fabrics. July 22—Robert Hoffman, Relationship of Fiber Properties to Fabric Properties.

New Safety Films. A new series of six sound slide films, entitled "Human Factors in Safety," has been released by the National Safety Council to aid management's foreman-training program. The 35 mm., 33⅓-r.p.m. training materials comprise a visual course for foreman that deals with production and job attitudes, as well as safety. The cartoon technique is used in two of the films, and action shots of workers on the job add realism to the plant scenes. The six films are entitled, "The Secret of Supervision," "Teaching Safety on the Job," "People Are All Alike," "Everybody's Different," "Teamwork for Safety," and "Safety Case Histories." National Safety Council, 20 N. Wacker Drive, Chicago 6, Ill., sponsors the films.

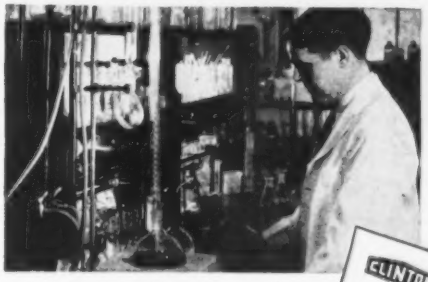
NATIONAL COTTON WEEK is set this year for May 9 to 14. Above is the official poster.

Cotton Growers Are Promotion-Conscious. "Change 'Em Every Day" is key phrase of the campaign that cotton men will carry to the nation next summer to stress that everyone should start each day "Cotton Fresh" from skin out. This slogan was stressed by L. A. Roberts, Memphis, Tenn., at the recent annual meeting of the National Cotton Council at Los Angeles. Council was also told that cotton industry this year may top last year's expenditures of $1,100,000 for advertising and promotion. Raw cotton men were urged to appraise existing production, marketing, and research methods, and, if found inadequate or obsolete, to revise as well as expand into new programs. There was particular emphasis on weed control, defoliation, harvesting, etc. Joseph L. Lanier, West Point, said cotton fashions had grown from one-season use to year-round day and night stand-bys.

Deans Meet at Charlottesville. The spring meeting of the National Council of Textile School Deans was held at Charlottesville, Va., Mar. 21 to 23, at the Institute of Textile Technology. About 25 textile-school deans and officials of the Textile Foundation attended. Thirteen schools are represented in the council.

You'll find Clinton Quality Starches Tops for Every textile purpose!

● Clinton Textile Starches are scientifically manufactured and guaranteed for unvarying uniformity and pH control. Clinton Starches give your warp the necessary body, strength and pliability that means quality weaving every time. Reduce loom stoppage and increase production with Clinton Textile Starches. For years Clinton has been a leader in the production of starches for all textile purposes.



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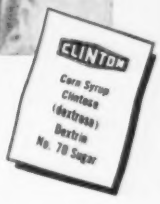
You'll find our staff of highly trained technicians helpful and profitable in solving your sizing problems. Without obligation, write or call Clinton Industries, Service Laboratory, Clinton, Iowa.



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In Conjunction with the SOUTHERN INDUSTRIAL CONFERENCE

The Southern Industrial Conference on Machinery and Metals, jointly sponsored by Georgia Tech and Southern engineering societies, will be held at Georgia Tech in conjunction with the Exposition. The program, jam-packed with subjects of great interest to any manufacturer, will feature prominent speakers and national authorities.

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When you know what's new, you can plan better for the future. So this great show is indeed a short-cut to tomorrow. Plan now to attend the Fourth Southern Machinery & Metals Exposition.

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NEWS ABOUT Suppliers

Saco-Lowell Shops, Boston Mass., has appointed James L. Truslow, formerly European representative of American Viscose Corp., as manager of its foreign sales department. He returns to United States in May and will make headquarters in Saco-Lowell's Boston office.

Numo Machine & Engineering Co., Charlotte, N. C., has appointed Matthews Equipment Co., Providence, R. I., exclusive agents for New England and South Atlantic States for its automatic spinning control.

Textile Machinery Div. of United Steel of America has been transferred to a separate corporate set-up and henceforth will be known as **Unistel Textile Machine Corp.** Its offices have been moved to 42 N. Main St., Port Chester, N. Y. Evan V. Quinn, vice president of United Steel of America, will be president of Unistel.

Odom Machine Mfg. Co., Roswell, Ga., has newly elected officers as follows: president and manager, M. W. Odom; vice president, W. R. Evans; secretary and treasurer, W. K. Evans; assistant secretary and treasurer, Miss Willie Coleman; assistant manager, R. T. Smith. Representing the Odom ball-bearing oilless comb box in various sections are: Harry Haynes, Chattanooga, Tenn.; O. T. Daniels, Dallas, Texas; Wilkin & Matthews, Charlotte, N. C.; Ben Comer Machinery Co., Atlanta, Ga.; M. T. Meadows y Cia, Buenos Aires, Argentina.

E. I. du Pont de Nemours & Co., Wilmington, Del., has made the following personnel changes in its Rayon Dept.: Dr. G. Preston Hoff has been named manager of the technical division, and Dr. Winfield W. Heckert, director of acetate rayon research, has been named assistant manager of the division, succeeding Dr. Hoff; Dr. Frank K. Signaigo, assistant director of Pioneering Research Sect., succeeds Dr. Heckert; Dr. Robert M. Hoffman, manager of Pioneering Research Sect., becomes assistant director there; Henry C. Frochling, manager of the Development Sect. of Rayon Technical Div., has been transferred to the Acetate Div. as New York district sales manager of Orlon acrylic fiber, succeeding Charles M. Wenrich, previously named district sales manager for acetate rayon yarns in New York; Dr. Donald F. Holmes succeeds Mr. Frochling; W. David R. Straughn, district sales manager of Rayon Div. at Providence, is transferred to Acetate Div. in Wilmington as manager of Technical Service Sect.; Henry G. Buckley succeeds Mr. Straughn at Providence; Millard G. Gamble, III, of the Rayon Div., Charlotte, N. C., office, succeeds Mr. Buckley as district sales representative in charge of rayon staple sales at Providence.

JOHN A. McPHERSON, SR., senior partner of the McPherson Co., architects and engineers, Greenville, S. C., has been honored by the American Society of Mechanical Engineers with elevation from a "Member" to a "Fellow." This honor is awarded only to those with distingushed engineering or scientific attainments. Mr. McPherson was also recently elected president of the South Carolina Society of Engineers, and he is past president of the Greenville section of ASME.

Texize Chemicals, Inc., Greenville, S. C., has appointed W. M. (Bill) Kline, Jr. as sales manager of the textile division. Mr. Kline was previously with Stein-Hall & Co.,

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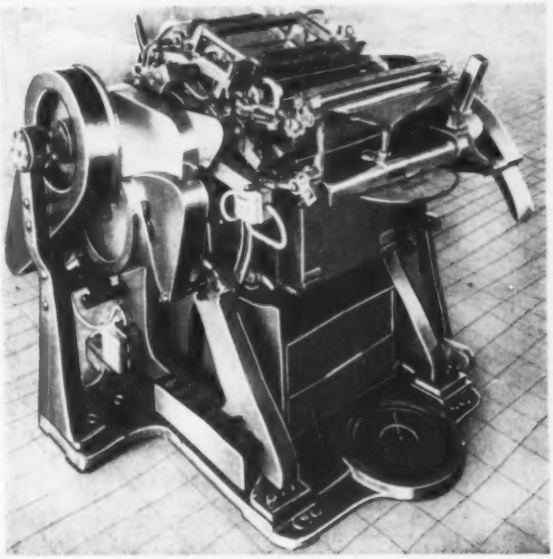
- COMBING MACHINES FOR CONTINENTAL WORSTED SYSTEM
- CARDS FOR COTTON AND RAYON STAPLE
- LOOMS FOR COTTON, RAYON, SILK



Single-head, rectilinear, horizontal combing machine. Feed up to 24 slivers. 6-in. circular comb with 18 rows of needles. Smooth movement and quiet in operation. Production from 140 to 300 pounds in 10 hours of operation. Send for complete information. Prompt Delivery.

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You can lower your steam costs with the new O & S *Powermaster*

The 1949 Powermaster steam generator—a high quality, complete steam plant, designed to cut your cost of making steam to the bone:

You save fuel because the Powermaster's three pass design puts out high quality steam at *maximum efficiency.*

You save labor because Powermaster operation is *fully automatic,* all parts are accessible, and maintenance is simplified.

You save on installation because this "packaged" unit is delivered with burner, boiler, controls, feed water system *built into one "package"* at the factory.

You can choose a Powermaster to burn light oil, heavy oil or gas—or any combination of these fuels with change-over in a few minutes. In 13 sizes from 15 HP up. Steam working pressures from 15 to 150 pounds.

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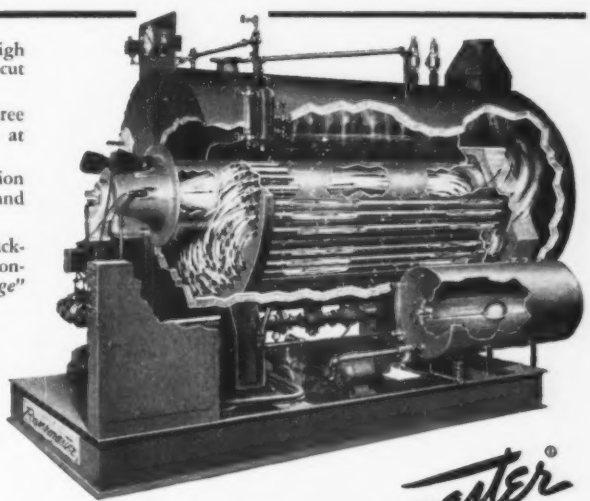

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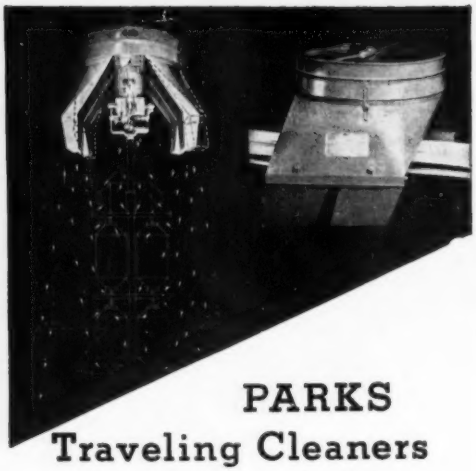

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Traveling Cleaners
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Every so often they give spinning frames (spoolers, warpers, winders, too) a mild fanning. Lint is shooed away before it has a chance to bunch.

Improves Quality	Improves Quantity
Cleaner Yarn	Fewer Ends Down
Smoother Yarn	Fewer Stops
Fewer Piecings	Fewer Pickouts
Fewer Seconds	Fewer Cutouts

Lessens waste; waste of material, waste of time. Better working conditions. More is accomplished with less effort.

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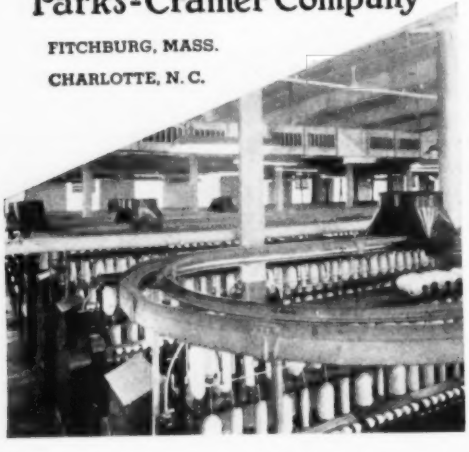


NEWS ABOUT *Suppliers* (Continued)

for the last two years manager of its Charlotte office. W. J. Greer is president of Texize Chemicals, Inc.

E. F. Houghton & Co., Philadelphia—Maj. A. E. Carpenter, president of this company, celebrated his 45th anniversary with the company recently. His father, Charles E. Carpenter, was with the company for 49 years, serving as president up to his death in 1929. His grandfather, Aaron E. Carpenter, who helped to found the company in 1865, headed it for 49 years.

Fisher Mfg. Co., Hartwell, Ga., has appointed J. W. Davis, 122 Dillingham St., Columbus, Ga., as exclusive representative in southern Georgia, Alabama, Mississippi, and Tennessee for Fisher textile trucks and Divine casters and wheels. Shelton & Associates, Greensboro, N. C., has been appointed agent in the North Carolina territory. Representing Fisher in South Carolina and northern Georgia is Carolina Supply Co., Greenville, S. C.

Corn Products Sales Co., New York, has appointed S. W. Roberts as manager of its Boston office, succeeding W. F. Larkin, who retired Feb. 24 after 19 years with Corn Products. C. L. Smith succeeds Mr. Roberts as manager at Syracuse.

Brown Instrument Co., Philadelphia, will start on May 12 an intensive course in the application of measuring and controlling instruments to textile processing at the Brown School of Instrumentation in Philadelphia. The course, one of several added for the benefit of specific industries, will be confined to textile manufacturers' and processors' personnel.

Stearns Magnetic Mfg. Co., Milwaukee, Wis., has appointed Richard H. Kochler as advertising manager. Formerly advertising manager for Vincent-McCall Co., Kenosha, Wis., Mr. Kochler succeeds Hugh Sharp, who is resigning to join Advertising & Publicity Associates, Milwaukee, as account executive.

Stein, Hall & Co., Inc., New York, N. Y.—William N. Kline, Jr., has resigned as manager of the Charlotte, N. C., office, and Frank W. Perry, manager of the Textile Sales Dept., will take over management of the Charlotte office for the time being.

WILLIAM D. BENSON has been appointed as head of sales for Industrial Rayon Corp., Cleveland, Ohio. He had resigned on Mar. 1 as general sales manager of the rayon division of American Viscose Corp., New York. He joined that company in 1924 as assistant manager of the Philadelphia sales office. Mr. Benson assumed his duties at the New York sales headquarters of Industrial Rayon on Mar. 15.

Metrotex, Inc., Elizabeth, N. J., has secured sole rights from Metakloth Co., Lodi, N. J., for the Thoratex treatment used in the cotton-filter-cloth trade. Thoratex renders the cotton fiber resistant to common corrosive alkaline and caustic solutions. Charles F. Russell, formerly vice president and general manager of Metakloth Co., is now treasurer and general manager of Metrotex, Inc., and Thomas H. Smith, previously plant superintendent of Metakloth, now occupies the same position with Metrotex, Inc.

Elgin Softener Corp., Elgin, Ill., and **Illinois Water Treatment Co.,** Rockford, Ill., have "joined forces." Under the new set-up, each company will maintain its name, identity, and personnel but through consolidating manufacturing operations, production economies can be accomplished which can be passed on to the user.

American Cyanamid Co., New York, N. Y., has formed a New Product Development Dept. with George W. Russell as manager. One of the functions of the new department will be to determine whether there are economic uses for selected products which have been developed in Cyanamid's research laboratories and for

LANE
CANVAS TRUCKS

SNAG PROOF
LONG LASTING
LIGHT RUNNING
LOW COST

Specialized TRUCKS and BASKETS for DYEHOUSE, SEWERS, LOOPERS, SEAMERS

On exhibit at Booth No. 248 Knitting Arts Show

LANE DYEHOUSE TRUCK
A highly developed carrier for DAMP GOODS. Duck embodies the latest proved formula for mildew-resistance. Frame non-rusting.

Manufactured by

W. T. LANE & BROS. INC.
CANVAS BASKET SPECIALISTS FOR HALF A CENTURY, POUGHKEEPSIE, NEW YORK

For perfect card grinding

DRONSFIELD'S PATENT MOTOR-DRIVEN FLAT GRINDING MACHINE No. 207

★ Designed for grinding revolving flats—four simultaneously—dismounted from the cards. Absolute precision in setting is the aim.

★ Dronsfield's Patent-Traverse Wheel Grinder, No. 120.

Dronsfield's Improved Grinding Roller No. 112.

TRADE MARKS: "ATLAS" AND "DRONSFIELD'S"

DRONSFIELD BROS. LTD.
OLDHAM . ENGLAND
ALL ENQUIRES TO: JOHN HETHERINGTON & SONS, INC. 72, LINCOLN STREET, BOSTON . MASS.

Whitman Yarns

MONOMAC
French Spun Yarns

Arlington
Bradford Spun Yarns

SPUN FIBERS, INC.
Lenoir, N. C.
Worsted Yarn on the American System

NONQUITT
Spun Rayon Blends
Specialty Yarns

WILLIAM Whitman COMPANY, INC.
261 Fifth Avenue, New York 16, N. Y.

BOSTON 78 Chauncy Street
CHARLOTTE Commercial Bank Building
PHILADELPHIA 1420 Walnut Street
CHICAGO 222 West Adams Street

NEWS ABOUT *Suppliers* (Continued)

which sales applications are not yet established.

Hooker Electrochemical Co., Niagara Falls, N. Y.—H. M. Hooker has resigned as chairman of the board but will continue as a member of the board of directors. He has been with the company 56 years. R. L. Murray, who was vice president in charge of development and research, is now executive vice president. R. W. Hooker, who has been vice president and sales manager, is now vice president in charge of sales. J. H. Babcock, formerly manager of development and research, has been named director in full charge of activities of that department. R. E. Wilkin, who has been eastern sales manager, is now general sales manager.

Behr-Manning Corp., Troy, New York, has appointed Dr. William C. Dearing as director of research and development in its Electro-Textile Div.

Hyster Co., Portland, Ore., has appointed McCall-Boykin Co., Inc., Calvert and 20th Sts., Baltimore, Md., as distributor for Hyster lift trucks, straddle trucks, and mobile cranes.

Fabrica de Oleos Gilbert, Ltda., Box 1919, Sao Paulo, Brazil—Mr. Gilbert of this firm was recently in New York to arrange for the marketing of his firm's "Gilbert Oil (polymerized)." This product is a vegetable oil, useful in the sizing and finishing of yarns and fabrics.

Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., has entered an agreement for acquisition of assets of H. Belfield Co., Philadelphia, manufacturer of control valves. Howard L. Murray, president of Belfield, would be elected a vice president of Minneapolis Honeywell and would be in charge of the new acquisition which will be known as the Belfield Valve Div.

Askania Regulator Co., Chicago, Ill., has appointed Wilson W. Wheeler as sales manager. He has lately headed the sales engineering department.

Mathieson Chemical Corp. has transferred Roland F. Bochm, who was district sales manager of Houston, Tex., office, to the ammonia department, with headquarters in New York. O. J. Theobald, Jr., formerly district sales manager at Charlotte, N. C., replaces Mr. Boehm at Houston. J. F. Carey, formerly a sales representative in the Charlotte territory, has been named district sales manager of the Charlotte office. Mathieson has contracted to purchase the business and assets of Southern Acid & Sulphur Co., Inc., with plants at Houston, Tex., and six other locations.

JULIAN T. POOL has been appointed sales representative for the Georgia-Alabama territory of New York & New Jersey Lubricant Co., New York. He succeeds the late Frank D. Jacoway.

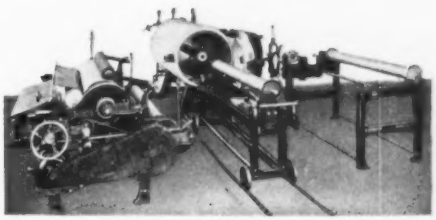
B. F. Goodrich Co., Akron, Ohio, has named I. N. Kimsey as field sales manager of Industrial Products Sales Dept. J. R. Thompson has been named manager of flat belting, conveyor, elevator, and transmission belting in the Industrial Products Sales Dept. Harold F. Mosher has been named manager of the Dallas district; William A. Schaub of the Denver district; and Raymond P. Russell of the Boston district.

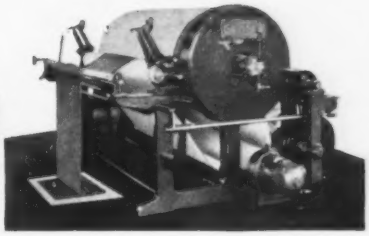
Bailey Meter Co., Cleveland, Ohio, has expanded its staff of field engineers. Among others added are the following: T. A. Melton to the Charlotte office in Independence Bldg.; W. G. Thiemann to the New York office at 30 Church St.; J. F. Kontz to the Cleveland district office; G. H. West to the Atlanta office at 184 Pryor St. N.W.; N. S. Wilson to the Philadelphia office in the City Center Bldg.; M. G. Johnson to the Houston office; R. P. Marche to the Chicago office in the Monadnock Bldg.

Robert Gair, Inc., New York, N. Y., has appointed Thomas E. Cathcart, Jr., as New England sales manager for folding cartons.

Sylvania Electric Products, Inc., Atlanta, Ga., has ap-

WHICH TO CHOOSE...?





A Full Or A Semi-Decating Machine

The cloth finishing you are striving to obtain may be best adapted to a Gessner Semi-Decating Machine or to a Gessner Full Decating Machine. The choice rests entirely upon the effect you desire. While a full decated finish can be produced only on a full decating machine, all semi-decating effects, for reasons of economy, should be obtained exclusively on a semi-decating machine.

The entire subject of decating is one which Gessner will welcome the opportunity to discuss with you.

DAVID GESSNER COMPANY

WORCESTER, MASS.

IMPROVED CLOTH FINISHING MACHINERY

10 TIMES FASTER THAN STITCHING!

SPINDLE TAPE LACING EQUIPMENT

Lace spindle tapes 10 times faster with Clipper No. 25 Spindle Tape Hooks. Tapes can be prepared in advance so frame is shut down only long enough to place new tape on the pulleys and join ends with connecting pin. Tapes run true—last longer—run smoother—require less tension—VIBRATION IS ELIMINATED

CONDENSER TAPE LACING EQUIPMENT

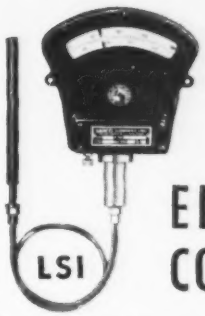
Lace condenser tapes with Clipper No. 25 Condenser Tape Hooks. Clipper laced tapes, prepared in advance, can be installed in a fraction of the time required for endless tapes. Tape may be purchased in the roll at considerable saving.

CLIPPER BELT LACER COMPANY, GRAND RAPIDS 2, MICHIGAN

Clipper BELT LACING EQUIPMENT

UL

SARCO



ELECTRIC CONTROLS

The most exacting temperature controls in chemical, plating and food plants are handled satisfactorily with simple, inexpensive Sarco's electric controls. Controlled temperature is indicated on large dial and can be changed by turning thumbscrew.

The Sarco line includes room thermostats, limit controls, aquastats, immersion types, and motor valves for heating, air conditioning and industrial applications. Ask for Catalog Nos. 1000 and 1025.

213

SARCO SAVES STEAM

SARCO COMPANY, INC.
Empire State Bldg., New York 1, N.Y.
SARCO CANADA, LTD., TORONTO 3, ONTARIO

YOU TRY IT TEST IT PROVE IT FREE

New TORNADO* Floor Machine

FAST, THOROUGH, EASY-TO-USE—
DOES ALL FLOOR MAINTENANCE WORK

A new, scientifically designed all-purpose floor machine which does better work, is correctly balanced for rapid performance, is easily controlled and handled, and is adjustable to operator. Quickly disassembled for storage and transport.

Write today for details of our free trial offer which enables you to try this better floor machine on your own work under your own conditions.

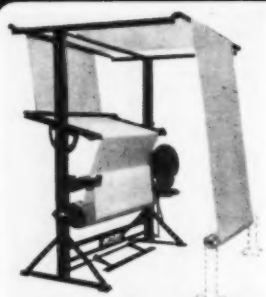
*Trade Mark Reg. U.S. Pat. Off.

FREE TRIAL OFFER

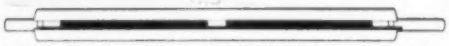
BREUER ELECTRIC MFG. CO.

5132 Ravenswood Avenue • Chicago 40, Illinois

"Standard" CLOTH INSPECTING, WINDING AND MEASURING MACHINE



For use on widths up to 60" and rolls to 30" diameter



Simplified action and sturdily constructed to give years of satisfactory service. Measuring Cylinder of cast aluminum, accurate 24" circumference, never requires covering—yet slipping is completely eliminated.

Collapsible Cloth Roll permits easy removal and saves cost of paper tubes — a saving that will pay for the machine. Knife type rolls can be used, if required.

Overhead thru-light inspection attachment provides speedy, wide area inspection.

For complete details — write for descriptive folder.

STAMILCO

STANDARD MILL SUPPLY CO.

1064 Main St. Pawtucket, R. I.

6708 Empire State Bldg. New York, N. Y.

SOUTHERN STANDARD MILL SUPPLY CO.

Charlotte, N. C.

NEWS ABOUT *Suppliers* (Continued)

pointed R. B. Fogarty, former assistant division manager, to be division manager to succeed Hugh Saussy, who plans to enter another business.

Amercoat Div., American Pipe & Construction Co., has appointed Arthur B. Smith, former assistant editor of *Construction Methods*, McGraw-Hill Publishing Co., as manager of its Southeastern district, with headquarters in Jacksonville, Fla.

Allen B. DuMont Laboratories, Clifton, N. Y., has made available the engineering development and model-shop facilities of the company's instrument div., to industry for the development, design, and construction of special cathode-ray instruments.

Mahon & Bone Co., 1218 Battleground Ave., Greensboro, N. C., has been appointed exclusive selling agent for the Safeway hook, a new shipping-room tool designed to prevent loss-of-time accidents in handling shipping containers as well as to prevent damage to container and contents.

Monsanto Chemical Co., St. Louis, Mo., has enlarged its facilities for the production of tetrasodium pyrophosphate, in demand as an ingredient of "built" soaps and detergents.

Link-Belt Co., Chicago, has appointed Roy E. Jones, heretofore assistant export manager, to be export manager of the company, succeeding Carl A. Woerwag, who is retiring from active service because of his health. Mr. Jones will have headquarters in New York. I. H. Oakes has been appointed as sales manager for enclosed drives, with headquarters at the company's Philadelphia plant. He will be assisted by Harry F. Kurz as representative, with headquarters at the Pershing Road plant in Chicago.

Ginsberg Machine Co., New York, N. Y., has appointed William R. Lieberman as sales manager and Si Margolis as advertising director of the newly-created Trim-Master Div. This division will promote.

U. S. Rubber Co. has moved into its new office and warehouse in Atlanta, Ga., which serves as headquarters for branch operations to distribute products in Alabama, Georgia, Florida, the Carolinas, and Eastern Tennessee. L. M. Moulson is branch operating manager.

***HERBERT W. WIDDOP** has been appointed sales manager of Synthane Corp., Oaks, Pa., to succeed the late J. B. Rittenhouse. Eldridge E. Smith, formerly in charge of the company's Philadelphia territory, has been named to succeed him as assistant sales manager. Mr. Widdop has been with the firm 16 years.*

Chain Belt Co., Milwaukee, Wis., has moved its Los Angeles district office and warehouse to new and larger quarters at 3838 Santa Fe Ave., Los Angeles 11, Calif. J. V. MacDonald, district manager, continues in charge.

Devoe & Raynolds Co., Inc., New York, reports that A. W. Bornhauser has been elected president of Jones-Dabney Co., Louisville, Ky., a division of Devoe & Raynolds. William C. Dabney, whom Mr. Bornhauser succeeds as president, is also a senior executive vice president of Devoe & Raynolds and will devote his time and attention to the over-all management problems of the parent company.

Carrier Corp., Syracuse, N. Y., has released a new 16 mm. sound motion picture in color dramatizing the functions and benefits of air conditioning in the home, in commerce, and in industry. Entitled "Service Unseen," the 22 mm. film covers the history of man-made weather from the development of the principles of air conditioning to its present state of usefulness. The processing of cotton and nylon is shown under both controlled and uncontrolled conditions. Distribution of the film is in hands of Castle Films, 445 Park Ave., New York, and prints are available without charge for showings by organized groups. Calvin Co., Kansas City, Mo., produced it.

EFFECTIVE LUBRICATION in spite of moisture

Operation of production machinery in the presence of moisture, steam and acids has always been a serious problem in many processing industries. There are a number of **LUBRIPLATE** Lubricants that satisfactorily meet these unfavorable operating conditions, thereby protecting machine parts against rust and corrosion.

Write for a copy of "The LUBRIPLATE FILM" written especially for your industry.

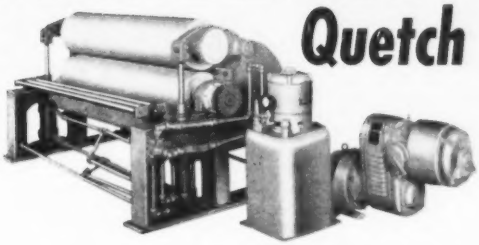
LUBRIPLATE

FISKE BROTHERS REFINING CO.

NEWARK 5, N. J.
TOLEDO 5, OHIO

DEALERS FROM COAST TO COAST
CONSULT YOUR CLASSIFIED TELEPHONE BOOK

PARKINSON'S Quetch



Speeds Up To 150 Yards Per Minute!

The Parkinson Quetch can be furnished with pneumatic or hydraulic controls to facilitate accurate roll pressures up to five tons.

This unit features stainless steel immersion tanks and tension rails, a fabricated steel frame with spherical roller bearings supporting the 12" diameter rubber covered rolls. Can be equipped with let-off and batcher drive. Rolls can be dismantled easily for resurfacing.

Complete specifications and prices on request.

EDWARD PARKINSON Mfg. Co. Inc.

387 CHARLES STREET, PROVIDENCE 4, RHODE ISLAND

IDEA

HOME USE OF ALUMINUM PAINT TO BRIGHTEN DARK STAIRWELLS

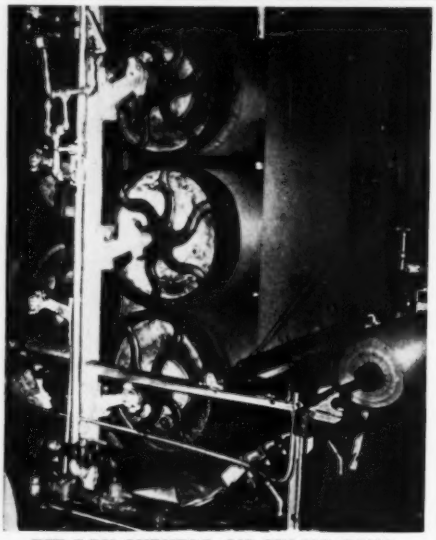
IMPORTANT TO TEXTILE MILL MAINTENANCE

FREE BOOK TELLS HOW, with aluminum paint, you get real one-coat coverage, plus maximum light reflectivity for greater safety and efficiency. Also answers many other maintenance painting questions of importance to textile mill operators. Shows money-saving advantages of using the RIGHT* aluminum paint. Send for your copy today. Address: Paint Service Bureau, ALUMINUM COMPANY OF AMERICA, 2174 Gulf Building, Pittsburgh 19, Pennsylvania.

ALCOA

*The RIGHT aluminum paint for this job is ALUMINUM METAL & MASONRY PAINT, made by many paint manufacturers. Buy this paint from suppliers who display the Alcoa shield on the brand they sell. It is a symbol of quality, indicating that their aluminum paints are made with

ALCOA ALUMINUM PIGMENT



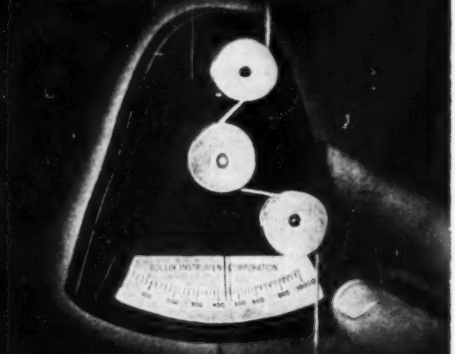
RED-RAY BURNERS ON STEAM CANS

at Paragon Dyeing & Finishing Co., Paterson, N. J. eliminate can marks — improve quality and increase production.

Write for bulletins

RED-RAY MANUFACTURING COMPANY, INC.
455 W. 45th St. New York 19, N. Y.

Boulin Tensiometers measure yarn, cord, filament and fine wire Tensions in winding and coiling operations. Their use insures uniformity and prevents overstretching and breaking of strands. Made in 12 standard ranges from 0 to 10 grams and up to 2 to 20 lbs. Full information contained in bulletin No. 647.



BOULIN INSTRUMENT CORPORATION
PORTABLE AND STATIONARY CENTRIFUGAL TACHOMETERS
PORTABLE CHRONOMETRIC AND STROBOSCOPIC TACHOMETERS
65 MADISON AVENUE, NEW YORK 16, N. Y.

NEWS ABOUT Mills

Cotton Mill News

Alpine Mills, Inc., No. 2 Plant, Morganton, N. C., has completed installation of combers. Plant, which had previously spun carded yarns, is now ready for production of combed yarns.

Armstrong Mill, Gastonia, N. C., has completed renovation program costing about $400,000, according to Robert J. Gurney, president of Gastonia Combed Yarn Corp. Program included battery of blending feeders in picker room, waste feeds, and new opening equipment. Rearrangements permit about 30% increase in blending process. Six new Whitin cards have been added and remaining ones overhauled. Abington vacuum card-stripping system for all non-reworkable waste has been installed. Also, two new Saco-Lowell lap winders and 36 deliveries of new Saco-Lowell controlled-draft frames. Spinning room has been modernized.

Brenham Cotton Mills, Inc., Brenham, Tex., plans construction of one-story addition where new equipment will be installed. Cost about $125,000.

Carolina Mills, Plant No. 2, Dillon, S. C., has resumed operations after being closed since last August. Several hundred employees have been recalled to work.

Carthage Weaving Co., Carthage, N. C., has resumed operations after being closed for two years. Mill has received War Department contract for camouflage material.

Cone Mills Corp., Greensboro, N. C., is erecting $100,000 office building addition to Proximity plant, and plans call for three-story structure to be completed during next few months.

Cross Cotton Mills Co., Marion, N. C., has expansion program going forward rapidly which will cost about $140,000 and which will include air-conditioning system, as well as cleaning system and other facilities.

E. Z. Thread Co., New York, N. Y., may build plant in Portsmouth, Va., on 50-acre plot in Alexander Park, suburb of city. If carried out, new construction is expected to cost $125,000, without equipment.

Erwin Cotton Mills Co., Durham, N. C., has approved plans for installation of air conditioning system in weave rooms and card and spinning rooms of No. 1 and 4 mills.

Graniteville Mills, Graniteville, S. C., has awarded contract to Daniel Construction Co., Greenville, S. C., for construction of bleachery to cost more than $100,000.

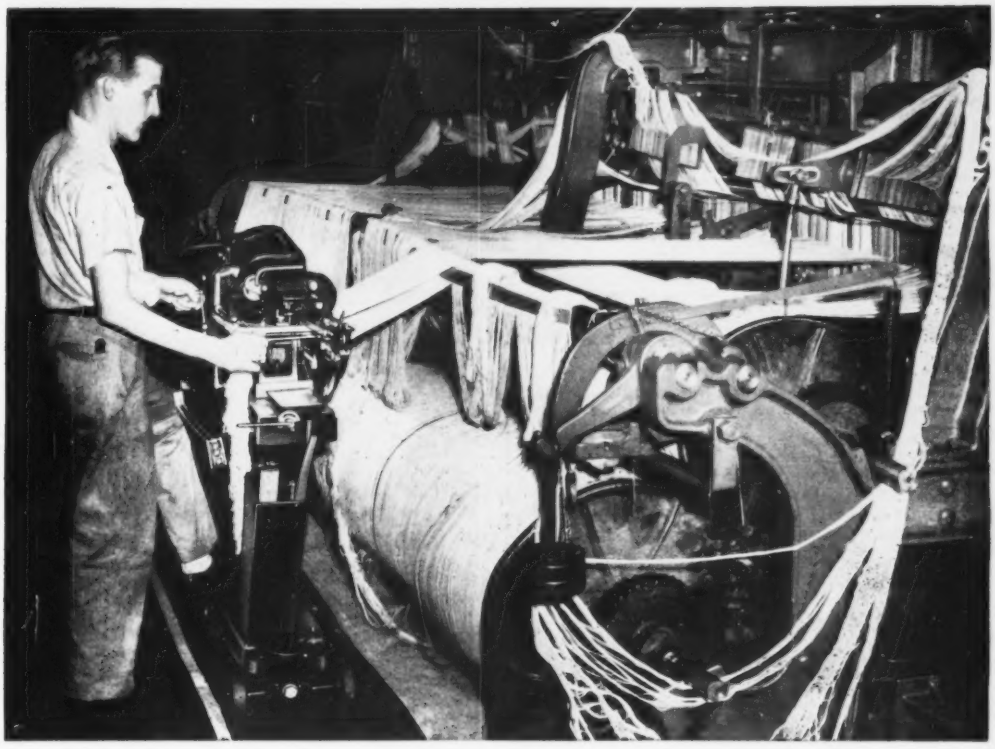
Groves Thread Co., Gastonia, N. C., has completed installation of new machinery and construction of two-story addition at cost of $150,000.

Hartwell Cotton Mills, Hartwell, Ga., plans expansion program that will cost $1,500,000 at Hartwell unit. Contract will be awarded soon for new building that will be 192x202 ft. and will join present building on west side. It will be one-story. Project will double size of plant.

Henrietta Mills, Inc., Caroleen, N. C., has approved plans for modernization and expansion to be carried out over period of several months. Cost reported close to $2,335,000, majority of fund to be used for machinery replacements.

Nashawena Mills, New Bedford, Mass., plans new boiler house at mill. Contract for boilers has been let to Babcock & Wilcox Co., New York, N. Y. Cost reported over $80,000.

Pendleton Reformatory, Pendleton, Ind., is planning to



BARBER-COLMAN PORTABLE WARP TYING MACHINE

REPLENISHES INSIDE WARP ON AXMINSTER CARPET LOOM IN 1/3 OF FORMER TIME

At the Bigelow-Sanford Carpet Company plant in Amsterdam, N. Y., the warp on the inside beam is tied in, as shown above, with a Barber-Colman Model LC Portable Warp Tying Machine at a considerable saving over the previous manual method. The Barber-Colman machine has proved particularly adaptable to work of this type because of its versatility, ease of operation, speed, accuracy, and reliability. The machine can handle a wide range of counts in various types of warps. It operates directly in back of the loom and is built to fit into narrow loom alleys. Ends are firmly tied in proper sequence, using a tight knot with short tails that will draw easily through the heddles. Users of the machine show very low maintenance expense; service, when necessary, being available promptly from Barber-Colman field offices which are backed by 45 years of experience in producing textile machinery. Ask your Barber-Colman representative for specific recommendations on the use of this machine in your mill.

DATA FROM BIGELOW-SANFORD 12-FOOT AXMINSTER CARPET LOOMS

MACHINE METHOD

Model LC Portable Warp Tying Machine
One Operator

Warp on Inside Beam:
2 beams end to end
1009 ends each beam
9s/3 cotton
Each beam 72" wide — 14 sley

Preparatory and Tying-In Time:
35 minutes each beam
Total Time — 70 minutes

MANUAL METHOD

Two girls and weaver require up to 3 hours time to re-tie the two above beams.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY
ROCKFORD • ILLINOIS • U. S. A.
FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND

BARNES SERVICE *Consulting Engineers*
TO THE TEXTILE INDUSTRY FOR OVER ½ CENTURY
Surveys—Reorganizations—New Plant Developments for Cotton, Wool, and Synthetic Yarn and Cloth Processing, Bleaching, Dyeing, Printing and Finishing.
★ Plant Appraisals ★ Mechanical and Operating Surveys—New Methods ★ Scheduling and Planning ★ Work Load Studies, Job Analysis and Evaluation, with Incentive Plans ★ Standard Cost Installations ★ Cost Control Methods
Labormeter Burden-meter Waste-meter
BARNES TEXTILE ASSOCIATES, Inc.
10 HIGH STREET, BOSTON 10, MASS.
318 MONTGOMERY BLDG., SPARTANBURG, S. C.

The following is an extract from a letter written by a client, indicating the range and quality of service rendered by the Barnes engineers:

"They have installed our cost systems, labormeters, carried out time and operating studies, worked with us in labor conferences, installed quality controls, advised us with regard to merchandising, assisted us in the purchase of machinery, laid out one completely modern plant which is in operation today, employing 2,300 employees, and have submitted plans for an additional plant and modern dye house.

"We consider them the outstanding textile engineers in the country today, both with regard to ability and integrity, and, during our nineteen years of close contact with this firm, their services have been invaluable."

For Maintained Shrinkage—
Perfect Finish—Long Life

HUYCK

→COMPRESSIVE SHRINKAGE←

BLANKETS

for use in shrinking fabrics to the *"Sanforized"* standard by the Compressive Shrinkage process, are daily meeting the most exacting requirements of finishers throughout the industry. From the lightest and finest fabric to the heaviest denim, there is a special Huyck blanket to meet your specific needs.

Huyck blankets retain high shrinkage and finish properties to the last.

***PALMER BLANKETS*—also available for your special requirements.**

Write for information or see our representative

F. C. HUYCK & SONS
KENWOOD MILLS
Rensselaer, N. Y.

NEWS ABOUT *Mills* (Continued)

add $400,000 textile mill to its institutional industries if reformatory officials succeed in inducing 1949 Indiana General Assembly to make appropriation. Mill, as proposed, would provide work for 500 inmates and offer method of relieving over-manned conditions in some of other institutional industries. O. F. Heslar is Indiana purchasing agent.

Pilgrim Corp., Providence, R. I., plans establishment of plant at Hinesville, Ga. Machinery from company's former location, where it operated under name of Pilgrim Rug Co., has been shipped to Hinesville. Operations are expected to start within next two months. In Providence, firm manufactured cotton rugs, cord, and Venetian blind tape.

Republic Cotton Mills, Great Falls, S. C., division of J. P. Stevens & Co., Inc., has remodeled plant and installed new equipment. Company has also air-conditioned three weave rooms.

Swift Spinning Mills, Columbus, Ga., has closed bids for proposed additions and improvements, including extension to carding department, new dust room in warehouse No. 1, alterations in warehouse No. 6, and other work. Contract will be let soon. Robert & Co., Atlanta, Ga., is architect and engineer.

Thomaston Mills, Thomaston, Ga., has asked bids on one-story addition for expansion of bleachery. Robert & Co., Atlanta, Ga., is architect and engineer.

Vanetta Corduroy Corp. has opened mill in Lowell, Mass., and is now offering 16-rib pinwale corduroy for men's, women's and children's wear. Machinery was installed last year with further deliveries expected during 1949 before production reaches its peak. Estimated year's ouptut is 1,500,000 yd. Charles Hamilton and Furth Dickerson are superintendents.

West Point Mfg. Co., Lanet, Ala., has added operating division to manufacture new bonded-fiber product. Unit will be known as Lantuck Div. and is headed by Dr. Herschel Cudd, director, and Joe Phillips, superintendent. Production of new material is already underway; it will be known by trade name, "Lantuck."

Wool Mill News

Berkeley Woolen Co., Martinsburg, W. Va., has voted to dissolve corporation and convey all assets to Virginia Woolen Co., of Winchester, Va.

Blackinton Mfg. Co., Blackinton Village, North Adams, Mass., will be started up by David Resnick, president and general manager, to make wool batting, stitched wool interlining, wool blends for shoulder-pad industry, wool blends for comforter trade, and wool pads for baby-carriage trade. It will also manufacture punch-loom rugs and punch-loom interlinings.

Canadian Worsted Manufacturers, Ltd., 874 Talbot St., St. Thomas, Ont., which was established one year ago, is having plans prepared for completion of two stories of unfinished concrete structure which stands in front of plant. When completed, building will be equipped for spinning worsted yarn.

Cerey Woolens, Inc., Pittsfield, Mass., has been chartered with capital of $100,000 to manufacture woolen goods. W. G. W. Josselyn, assistant treasurer, Berkshire Woolen Co., Pittsfield, is president and treasurer.

Clinton Woolen Mills, Clinton, Mich., has superstructure under way for new three-story addition, 70x185 ft., and will equip for increased capacity.

Collins & Aikman Corp., New York, N. Y., has recently borrowed $3,000,000 to further modernize its plants and increase working capital. Loan was made by Metropolitan Life Insurance Co.

Gonic Mfg. Co., Rochester, N. H., which closed last November, has reopened with nearly all of its 500 workers back on job.

Matthews Woolen Corp., new firm, has purchased former Heinz Canning Plant at Matthews, Ind., and will equip with machinery bought from U. S. Rubber Co. plant in Mishawaka, Ind. Rubber company is discontinuing woolen division. Paul H. Hohn, executive vice president of new firm, had been head of woolen division of U. S. Rub-

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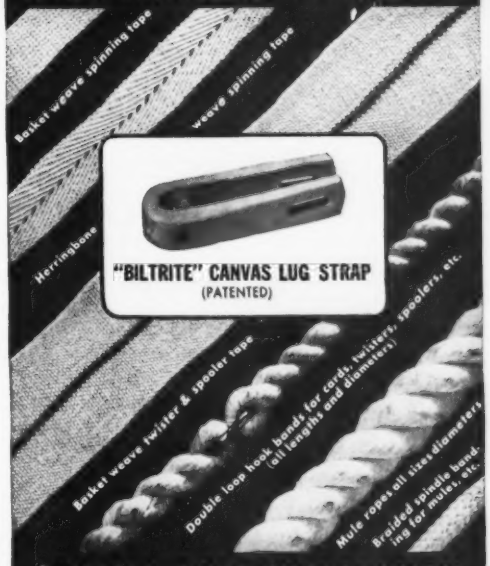
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NEWS ABOUT *Mills*

ber at Mishawaka until its discontinuance. He is also head of Cambridge City Woolen Corp.

Lockport Felt Co., Lockport, N. Y., has spent $117,000 on modernization of production methods and will invest additional $100,000 on building and modernization in 1949.

Nice Yarn Co., Downington, Pa., has purchased plant at Wakefield, R. I., for manufacture of woolen yarn.

St. Marys Woolen Co., St. Marys, Ohio, has recently bought Valley Woolen Mills, Homer, N. Y. A. L. Bellone will continue as president.

Fred Whitaker Co., Philadelphia, Pa., has plans for two-story addition, about 80x104 ft., and will begin work soon.

Synthetic Mill News

Athens Mfg. Co., Athens, Ga., is converting 15,000 sq. ft. of floor space from manufacture of tire cord to rayon dress goods and sportswear. About 200 Draper model XD looms have been installed.

Augusta Weaving Div. of Aiken Mills, Augusta, Ga., has started weaving glass fiber cloth. Plant, owned and operated by United Merchants & Manufacturers, Inc., is in building formerly occupied by Singleton Silk Mills. It has been renovated and equipped with special machinery.

Burlington Mills Corp. has requested permit for construction of dye-waste disposal system on bed of Staunton River at Hurt, near Altavista, Va. Company has purchased tract of land adjacent to Piedmont Heights plant and trucking terminal to streamline manufacturing operations at Burlington and to provide additional warehouse space. Corporation will use property for rounding out jacquard weaving operations in Burlington Mills Decorative Fabrics Div. which is currently carried on in Piedmont Heights plant. Burlington laboratory at Greensboro, N. C., has expansion program under way that was begun in fall of 1948 and will triple size of present plant.

Chicopee Mfg. Corp., Lumite Div., Cornelia, Ga., will complete 10,000 sq. ft. addition to main plant for production of woven saran screening.

Demopolis, Ala.—Rep. Boykin (D., Ala.), has announced that plans are underway for what is described as $80,000,000 plant for rayon and allied products. Those interested in plant include New York bankers and persons living in Italy and Sweden. One obstacle in planning for operations is import duties on machinery now in Italy.

Fisher Mills, Inc., has leased one-story building at 3700 Dell Ave., North Bergen, N. J., and will use for weaving fabrics.

Galax Mills, Galax, Va., has installed 100 new Draper looms, thus completing expansion program at mill. Galax is unit of Burlington Mills Corp.

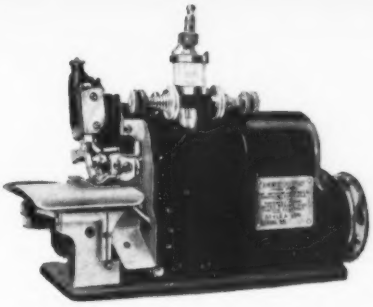
Navaho Weaving Corp., Fall River, Mass., is considering purchase of last unit of Esmond Mills property at Smithfield, R. I. Manufacturing rayon fabrics, firm would install 100 looms and employ 100 workers at start.

New Bedford, Mass.—New weaving plant is to be established in part of former Fairhaven Mills by Albert E. Catterall, owner of Bates Silk Mill, Warren, R. I. When in full operation, plant will employ up to 100 workers.

Owens - Corning Fiberglas Corp., has transferred to its plant at Ashton, R. I., customer service and processing laboratory formerly located in Newark, Ohio. Basic research laboratory will remain in Newark. Processing laboratory that occupies about 40,000 sq. ft. of floor space at Ashton will be used to develop, in cooperation with textile industry, new end uses for Fiberglas yarn.

Robbins Cloth Mills, Inc., Aberdeen unit, Aberdeen, N. C., has placed one-third of manufacturing equipment in operation. Eventually, it is planned to have total of 192 looms and 19,200 spindles in production of wide-spun rayon suiting.

Sun Ray, Inc., has leased plant at Lonsdale, R. I., for manufacture of rayon piece goods.



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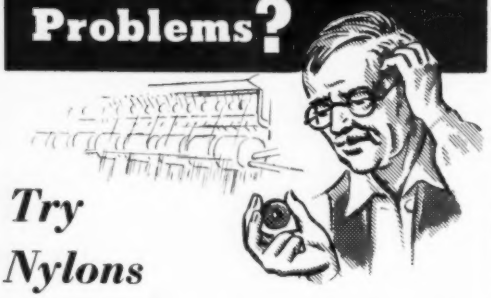

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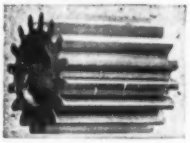

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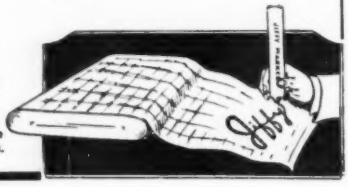


NEWS ABOUT *Mills*

United States Rubber Co., Winnsboro Mills, Winnsboro, S. C., has installed 65 looms to be used in experimental weaving of rayon suitings and cotton ginghams.

Knitting Mill News

Apex Hosiery Co., Philadelphia, Pa., has merged with **Schuylkill Valley Mills**, Phoenixville, Pa., and operations will be continued under Apex name. William Meyer has been named president of both firms. Schuylkill plant is understood to have 90 knitting, 40 looping, and 35 sewing machines. Mill will continue, as at present, with new finer gage machinery being added as it becomes available.

Bryan Full-Fashioned Mills, Chattanooga, Tenn., has installed 32-section, 60-gage machines and may replace its 54-gage knitters with machines of the finer gage.

Harry L. Cooper Hosiery Mills has been formed, with executive offices at 385 Fifth Ave., New York, N. Y., and mill at Southampton, Pa. Plant was purchased from Fred Tecce and Harold Berger and is completely equipped with machines to manufacture 51-gage and 54-gage 15-den. nylons. Mr. Cooper was formerly with Franklin Hosiery Mills.

Dainty Dot Hosiery Co., 115 Essex St., Boston, Mass., plans new mill at Franklin, N. H., where site is being secured on Daniel Webster Highway. Cost estimated about $100,000.

Dennis Mills, Inc., Lumberton, N. C., is expected to resume operations of Global Mills plant. M. S. Davan is president of former firm. Plant produces knit fabrics and dyes and bleaches cloth.

Elmes Fabrics, Inc., 153 Spark St., Brockton, Mass., has been organized with capital of $50,000 to operate mill for manufacture of knitted fabrics. George C. Elmes is president.

J. Feinberg & Son, Inc., Nocturne Hosiery Div., Rock Hill, S. C., plans purchase of building it now occupies from Rock Hill Hosiery Building Co. It is understood price will be about $50,000.

Guilford Mills, Greensboro, N. C., will soon occupy new $40,000 plant on Winston Rd. This is rayon and nylon tricot-knitting plant, and it has been located at 232 Sycamore St.

Hoover Hosiery Co., Concord, N. C., has completed construction of addition to mill to be used in expansion of full-fashioned hosiery division. Unit has been placed in partial operation and additional machinery will soon be installed.

High Top Sportswear, Inc., New York, N. Y., has been incorporated with capital of 200 shares of stock, no par value, to operate mill for manufacture of knitted outerwear. R. S. Frank, 280 Broadway, New York, N. Y., is attorney and representative.

Liberty Hosiery Mills, Liberty, N. C., has purchased Gem Mill, Gibsonville, N. C., from Burlington Mills Corp., and will start operations after necessary machinery has been procured. M. B. Smith, P. O. Box 686, Burlington, N. C., is an official of Liberty organization.

Lykens Hosiery Mills, Lykens, Pa., which recently purchased unused buildings formerly occupied by Kissinger Knitting Mills, East Lykens, Pa., will start operation of hosiery finishing plant in Kissinger building. Roger Kissinger will direct operations. Actual knitting will continue to be done in company's present mill in Lykens.

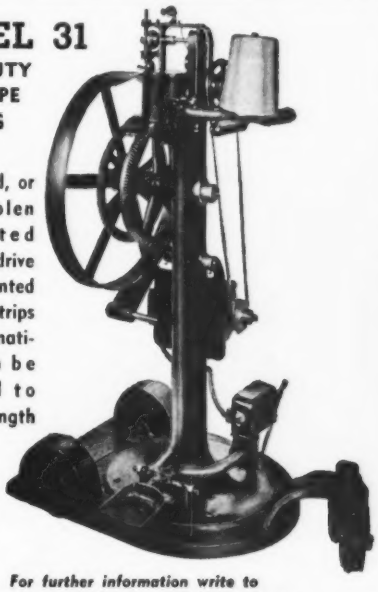
McCrary Hosiery Mills, Asheboro, N. C., and **Ramseur Hosiery Mills**, Ramseur, N. C., both manufacturers of women's full-fashioned hosiery, recently formed merger and will operate as single organization. C. W. McCrary is president of consolidated company.

Monrovia Hosiery Mills, Inc., Monrovia, Calif., went into production late in 1948. Plant is equipped with new machinery throughout and production is being confined to 54-gage, 15-den. nylon hosiery. Kurt Theirfelder is plant manager.

Owen Osborne, Inc., unit at Gainesville, Ga., will install air-conditioning equipment and new 51-gage knitting ma-

MODEL 31

HEAVY DUTY GEAR TYPE SEWING HEAD



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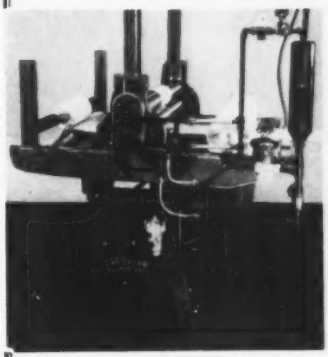

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NEWS ABOUT *Mills* (Continued)

chines to replace certain present equipment. Looping and seaming departments will be moved to another section to provide straight-line production facilities.

Pilot Full Fashion Mills, Valdese, N. C., has constructed new warehouse and expanded office space. Cost of two projects was $62,000.

Pannill Knitting Co., Martinsville, Va., sustained fire loss recently, when part of mill was damaged. No official estimate of loss announced. Damage will be replaced.

Quebec Rayon Mills, Ltd., Sherbrooke, Que., plans new one-story addition to mill. Cost reported over $275,000, with equipment.

Richmond Hosiery Mills, Rossville, Ga., has expanded nylon-hosiery inspection department to take in area formerly occupied by the superintendent's office which has been moved to main building. Fluorescent lighting has been installed throughout inspection area.

Rockford Mitten & Hosiery Co., Rockford, Ill., has changed name to **Rockford Textile Mills, Inc.**

Shannon Hosiery Mills, Inc., Columbus, Ga., has rejected bids recently received for one-story addition to plant. Project will be deferred.

Spalding Knitting Co., Griffin, Ga., has completed addition to house dye plant. Mill has also installed 88 new circular-knitting machines and additional loopers. New air-conditioning system is being added to office.

Supersilk Hosiery Mills, 1151 Florence St., London, Ont., is having dyehouse erected that will be 75x35 ft. Work on addition to main plant has been deferred.

Van Raalte Co., New York, N. Y., has completed installation of 10 machines in new mill at Franklin, N. C., and manufacture of full-fashioned nylon hosiery is under way.

Ware Knitting Co., Ware, Mass., will add 40,000 sq. ft. of space to present plant by leasing three-story building from Ware Industries.

Dyeing & Finishing Plants

Arkwright Finishing Co., Arkwright, R. I., has commissioned Henry A. McLean, Providence, to prepare plans for one-story and basement addition to be used for laboratory. Mark Brickhill is president of company.

Colonial Mills, Inc., is planning to expand operations for dyeing and finishing spun rayon at its plant in Clarksville, Va., and will construct 32,000 sq. ft. addition. Part of this space will be for warehousing. C. M. Guest & Son, Anderson, S. C., is contractor.

Clarksville Finishing Co., Clarksville, Va., has let contract to C. M. Guest & Sons, Anderson, S. C., for new one-story building for warehouse. Cost about $75,000.

De Negri Yarn Dyeing Corp. has been formed with capital of $125,000 to dye and finish textiles at 63 East 24th St., Paterson, N. J. Incorporators are Pasquale F. DeNegri, Lawrence P. Faragallia, and Allan Margolis.

Lowell Bleachery, South, Experiment, Ga., has completed new $175,000 addition that has been under construction since last year.

National Dyeing & Finishing Corp. has opened $1,000,000 plant at Culver City, Calif., less than two years from time its East Los Angeles plant was destroyed by fire. New 60,000 sq. ft. plant has what is believed to be only Sanforized shrinking equipment in West. It is equipped with new three-roll 15-ton micro-set dye padder. Previously serving primarily as cotton finishing plant, new setup also handles rayon.

Silver Line Dye Works, Brooklyn, N. Y., has moved entire plant to two-story building at 149-153 Plymouth St., without interruption of production. Increased floor space, modernized equipment, and lighting arrangements will facilitate movement of goods through plant and increase quality of production.

Toronto Dyeing & Finishing Works, 354 Dufferin St., Toronto, is having single-story addition erected to warehouse.

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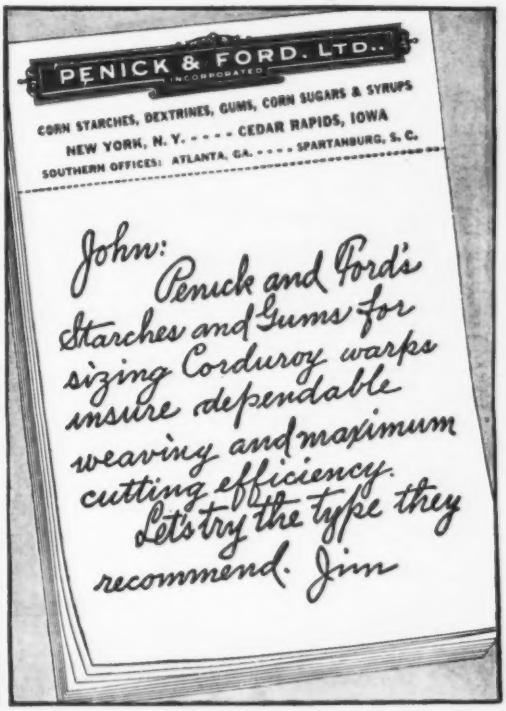
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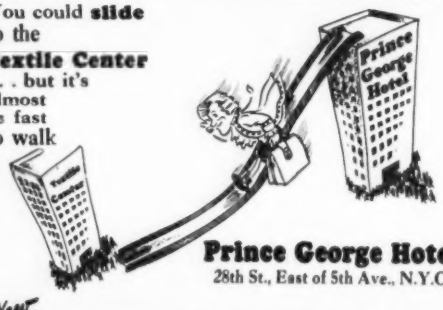

Prince George Hotel
28th St., East of 5th Ave., N.Y.C.
New *Showrooms for Attractive Displays.*

NEWS ABOUT Men

Albert R. Jube has been elected president of Collins & Aikman Corp., New York, N. Y. He succeeds Willis C. McCullough, who died last month.

Malcolm G. Chace, Jr., has been named president of Berkshire Fine Spinning Associates, Inc., Providence, R. I. He succeeds **John J. McMahon,** who becomes board chairman. Mr. Chace moves up from his post of treasurer and vice president. Directors accepted with regret the resignation of **George E. Westberg,** vice president and director.

Lawrence O. Hammett is reported to have resigned as president of Orr Mills, Anderson, S. C. This is unit of M. Lowenstein & Sons, Inc.

Spencer B. Hanes, Sr., vice president in charge of manufacturing of P. H. Hanes Knitting Co., Winston-Salem, N. C., has retired after 35 years with company.

Francis J. Holland has been elected president of Columbia Mills, Inc., Wilkes-Barre, Pa., succeeding **Howard E. Cook.** Other officers elected are **William Merle Sebring,** vice president and secretary; **Edward F. O'Reilly,** vice president and general sales manager; **Edward F. March,** treasurer and comptroller; **Charles A. Cato,** assistant treasurer; and **H. E. Wilkins, Jr.,** assistant secretary.

B. S. Rose, of Greenville, S. C., a vice president of Woodside Mills, Inc., Greenville, and **E. P. Cave,** president of Ely & Walker Dry Goods Co., St. Louis, Mo., have been elected directors of Woodside Mills, Inc.

David S. Cook has been appointed vice president in charge of manufacturing operation for Clinton Cotton Mills and Lydia Cotton Mills, of Clinton, S. C., and will assume his new duties immediately. He was formerly president of Highland City Mills, Talladega, Ala.

R. Curtis Jordan, Jr., has been elected first vice president of Jordan Mills, Inc., Columbus, Ga., to succeed the late Frank H. Naylor. **R. H. Rabbitt** succeeds Mr. Jordan as second vice president.

TRACY A. ADAMS, textile chemical engineer, has been named executive vice president and general manager of United States Finishing Co., Norwich, Conn. He will take over active supervision of an extensive modernization and rehabilitation program at the four plants of the company. He has lately been consulting engineer with Barnes Textile Associates of Boston, and was formerly executive vice president and general manager of Arnold Print Works. He previously served as manager of Lawrence Print Works of the Aspinook Co. and prior to that was superintendent of the plain-shade plant of Sayles Finishing Co.. Jarred J. Mowry has resigned as executive vice president and general manager, to assume the post of general manager of the U. S. Finishing Co., Hartsville, S. C., plant. The lightening of Mr. Mowry's duties was made necessary as the result of physicians' orders, but he will continue as a director.

Charles K. Seid, vice president and general manager of Peerless Mills, Narrows, Va., has resigned.

George A. Howell has resigned as vice president and general manager of Aleo Mfg. Co., Rockingham, N. C.

Webster E. Plaisted has become vice president of Pacific Mills, Lawrence, Mass.

Frederick H. Rhodes, consultant of Madison, N. J., has

NEWS ABOUT *Men*

(Continued)

been retained by Stehli & Co., New York, N. Y., to organize and manage its industrial products division.

J. F. Nicholl has been elected vice president and a member of the board of directors, and **G. H. Day II** has been elected vice president of the Chicopee Mfg. Corp. of Georgia. Mr. Nicholl is general manager of the Lumite Div. and Mr. Day is general sales manager of that division.

Gordon W. Rule, of Washington, D. C., has been named counsel to the recently formed Textile Industry Committee on Foreign Trade, which is composed of representatives of the American Cotton Manufacturers Association, Association of Cotton-Textile Merchants, Cotton-Textile Institute, and Textile Export Association of the United States for the purpose of maintaining and developing the industry's export and import trade and of combatting unfair restrictions imposed on American textiles in markets overseas.

R. K. Hubbard, president of Packard Mills, Inc., Webster, Mass.; **G. A. McClatchie**, president of United States Finishing Co., Norwich, Conn.; and **A. I. Webber**, treasurer of Merrimack Mfg. Co., Lowell, Mass., were recently elected to the executive committee of the New England Textile Foundation, Providence, R. I.

Thomas L. Carroll, personnel director of Wachovia Bank & Trust Co., Winston-Salem, N. C., has been named assistant to the executive vice president of the National Cotton Council, and will have headquarters in Charlotte, N. C.

Kenneth S. Campbell has been named professor of textile chemistry and dyeing; **Dame S. Hamby** has been named assistant professor of textiles in yarn manufacturing; **Ralph L. Parker**, former owner and operator of the Parker Novelty Mills at Franklinton, has been named assistant professor of textiles in department of fabric development and construction; and **Richard C. Davis** has been appointed assistant professor of textile chemistry and dyeing—all of these at the School of Textiles at N. C. State College, Raleigh.

Dr. Fred Ward Cox, Jr., has been appointed assistant director of the Georgia Tech Engineering Experiment Station. He succeeds Dr. **Paul Webber**, who has served as assistant director since 1941. Dr. Cox has been head of the applied chemistry division of the Southern Research Institute at Birmingham, Ala.

***ALDEN H. BURKHOLDER** has been appointed manager of rayon research for Industrial Rayon Corp., Cleveland, Ohio. Kenneth M. McLellan and Dr. George P. Standley have been named assistant managers of rayon research. Mr. Burkholder joined Industrial Rayon's research staff in 1929. He has been assistant research manager since 1944 and is credited with some of the fundamental inventions which led to development of the company's continuous process. Mr. McLellan joined the control-laboratory staff in 1933, and has been in research since 1934. He played an important part in the development of the continuous process and in its adaptation to the manufacture of tire rayon. Dr. Standley joined Industrial in 1940 after nine years with the DuPont organization. He has concentrated on development of special high-strength rayons, particularly for use in tires.*

Leonard A. Mobley, of Yazoo City, Miss., has been appointed to a post on the staff of the National Cotton Council's Foreign Trade Div., at its Washington, D. C., office.

Ernest D. Kosting has been named advertising manager of Burlington Mills Corp. (N. Y.). He will report directly to **Kenneth Collins**, vice president in charge of advertising and public relations.

R. P. Alexander has been appointed general superintendent of Slater Mfg. Co., Slater, S. C., succeeding **Jesse A. White**, formerly joint manager of Slater Mfg. Co., and Cleveland Cloth Mills, Shelby, N. C. Mr. White has been transferred to Great Falls, S. C., as general manager of

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TEXTILE TRUCKS

FOR EVERY MILL PURPOSE

Scientifically designed to avoid damage to machinery on contact, and ruggedly reinforced at points of greatest stress. Vulcanized Fibre with cured Oak Bands, and Steel Reinforced. Also made in Galvanized Steel, Aluminum, and Stainless Steel.

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Specializing in Textiles for over One-Third of a Century
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GREENVILLE, S. C.
FALL RIVER, MASS.

PAY ROLL CONTROLS
WORK LOAD STUDIES
COST SYSTEMS
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Two exclusive features Affording Long Life

1. Automatic - bobbin holders equipped with holding wings electrically hardened all the way through.
2. Holding wings hold positively in position by skeleton washer—no sliding around.

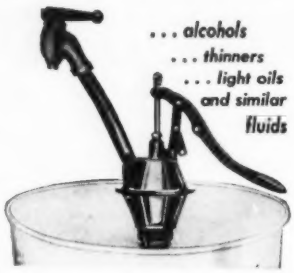
We make holders for ¾" to 2½" bobbin heads, including large-package wood and paper bobbins, also special bobbins. Duplex holders take both automatic and non-automatic bobbins.

Holders for all types of mules, frames, twisters and winders.

MURDOCK & GEB CO., Franklin, Mass.
Manufacturers of Bobbin Holders for Over Fifty Years

NEW! FOR VOLATILE LIQUIDS

Long Life
provided by
nylon diaphragm



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Architects & Engineers
INDUSTRIAL & TEXTILE BUILDINGS
WILKES-BARRE & HARRISBURG
PENNSYLVANIA

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Made any size or style wanted. Center and end wheels. Water proofed and chemically resistant finish.
Self-oiling and no grease can drop on the floor. Used for all kinds of fine yarns, wet or dry.
Bottoms finished 1⅜". Sides and ends finished 1¼", 1½", 1" or ⅞", whichever desired. Made from maple, poplar, cypress or fir lumber.
WRITE US TODAY.

FRANK BAILEY
CEDAR BROOK P. O.
CAMDEN CO., NEW JERSEY

NEWS ABOUT *Men*

Republic Cotton Mills, division of J. P. Stevens & Co., Inc. Upon succeeding Mr. White, Mr. Alexander renamed managerial staff of mill: **H. S. Richardson**, assistant general superintendent; **R. H. Atkinson**, personnel director; **C. C. Cromton**, cost department supervisor; **J. D. Huckabee**, planning department supervisor; **H. B. Gosnell**, weaving superintendent; and **G. E. Blanton**, preparation superintendent.

James L. Bryant is now production control manager with Deering, Milliken & Co., New York, N. Y. He was formerly with Pacific Mills, Boston, Mass.

Heflin C. Burke has been appointed production supervisor at Manchester unit of Callaway Mills, Manchester, Ga., having been promoted to this position.

A. V. Cawfield, formerly operating superintendent of Kilburn Mills, New Bedford, Mass., is now directly in charge of Irene Mills, Taylorsville, N. C., one of Gurney mill units.

Clayton H. Carlson has been appointed plant superintendent of Lincoln Bleachery & Dye Works, Lonsdale, R. I. He was at one time associated with U. S. Finishing Co., Sterling, Conn., and later served at Farr Alpaca Co., Holyoke, Mass., as foreman-dyer.

Percy C. Gregory, Jr., has been promoted from assistant general manager of Aspinook Corp. (Union Bleachery), Greenville, S. C., to general manager.

Norman Garlington has been appointed general superintendent of Brookside Mills, Knoxville, Tenn., succeeding **John W. Card**. At same plant, **Stanley Jessiman** has been elected vice president and general manager, succeeding **Arthur Emery**; and **Thomas Epstein**, secretary of organization. Controlling interest of Brookside is now held by Secretary of Interior, **James A. Krug**.

Joseph L. Wright, formerly superintendent of unit No. 3 of Republic Cotton Mills, division of J. P. Stevens & Co., Inc., of Great Falls, S. C., has been appointed general superintendent of unit of American Yarn & Processing Co., at Mount Holly, N. C.

Paul Stocker has been named assistant to **Albert Huber**, head of fabric development and research division of Verney Corp. Mr. Stocker has been associated with fabric development and acetate division of E. I. du Pont de Nemours & Co.

S. Jack Davis, chief chemist of research division, has been promoted to assistant to director of research at Callaway mills, LaGrange, Ga.

Harry A. Dickerson, formerly chief supervisor of spinning plant of Waynesboro, Va., unit of E. I. du Pont de Nemours & Co., has been appointed to company's new Orlon project, reporting to **W. C. Eberlin**. **James H. Ellett**, formerly spinning-area supervisor, has been promoted to chief supervisor of spinning, reporting to **W. L. Scarborough**, manufacturing superintendent.

George W. Nicely has been appointed to head the spun rayon department of Southeastern Cottons, Inc., New York. For several years, he had been in charge of sales for the Fontaine Converting Works, Inc.

Stephen V. Gilligan has been appointed director of industrial relations for Goodall-Sanford, Inc., Sanford, Maine. He was recently with the American Woolen Co.

John W. May, formerly chief engineer of Wrights Automatic Machine Co., Durham, N. C., has become chief mechanical engineer for Deering, Milliken Research Trust, of Greenwich and Stamford, Conn. He will direct all mechanical research and development on textile machinery for company's mill.

Joseph Merten will rejoin Verney Corp., New York, N. Y., where he will be in complete charge of all converting activities. Formerly with company in similar capacity, he has for last two years been director of converting division of Textron, Inc.

W. Olin Nesbit, Jr., Charlotte, N. C., and **Gordon T. Matheson**, Mooresville, N. C., have been added to board of directors of Mooresville Mills, Mooresville, N. C.

W. W. Aultman, formerly production manager and general superintendent of New-

NEWS ABOUT *Men* (Continued)

berry Textile Mills, Newberry, S. C., has accepted position with Sellers Mfg. Co., as general superintendent of Jordan unit at Cedar Falls, N. C., Royal unit at Wake Forest, N. C., and unit at Saxapahaw, N. C., with general offices in Saxapahaw.

Anton M. Vidz-Ward has joined Burlington Mills Corp., New York, N. Y., and will specialize in development phase of tricot fabrics, reporting to **Daniel F. Sheehy**, division head.

H. A. Rollins has been appointed general superintendent of Cleveland Cloth Mills, Shelby, N. C. He was promoted to this position.

H. J. White, assistant manager of rayon department of E. I. du Pont de Nemours Co., Inc., Waynesboro, Va., will retire after more than 33 years service with organization. **A. F. Buchanan, Jr.**, manager of technical division of rayon department, has assumed new duties as acting assistant manager of department.

Wesley A. Armstrong, plant manager of U. S. Rubber Co., Bristol, R. I., has been named production manager for mechanical goods, general products, Lastex yarns, and rubber thread. **Frederick S. Bartlett**, assistant plant manager, succeeds Mr. Armstrong.

Oswald Beck has become general overseer of wet and dry finishing at Arlington Mills, Lawrence, Mass., succeeding **Walter H. Wood**, who is now with Deering Milliken & Co., Inc., at Union, S. C., plant. Mr. Wood will be in charge of finishing at Pendleton, S. C., new plant of Deering Milliken, when it is ready for occupancy. **Lester J. Kane** has been promoted to overseer of wet finishing at Arlington, succeeding Mr. Beck.

Wilson Adams, of Burlington Mills divisional offices, Burlington, N. C., has been transferred to company's New York offices where his responsibility will be production programming and mill contacts for Decorative Fabrics Div. He has served as superintendent of Galax Weaving Co., Galax, Va., and cloth finishing plant at Burlington.

C. A. Pohlers has resigned as director of Patterson Mills Co., Rosemary Mfg. Co., and Roanoke Mills Co., of Roanoke Rapids, N. C. He also resigned from his executive post with Sintex Mills, division of Simmons Co., after 50 years in industry.

C. C. Chase, who has been laboratory technician at Watts Mills, Laurens, S. C., has been transferred to pilot plant of Victor-Monaghan Co., division of J. P. Stevens & Co., Inc., at Greenville, S. C.

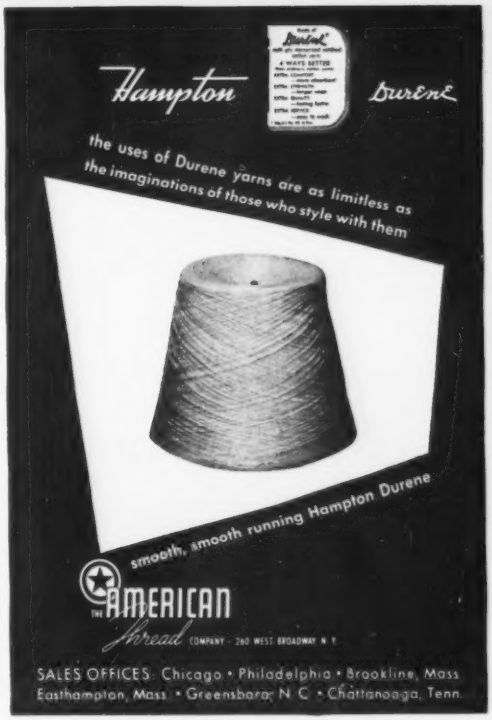
OBITUARY

Max Curtis Miller, 57, of Cumberland, R. I., a pioneer inventor in the knitting machine and other textile fields, died at Philadelphia, Pa., on Feb. 27. He was a native of Russia and of German parentage, but associated with American knitting machine manufacturers early in his career. He was the holder of some 250 patents. He was the author of numerous knitting articles published in TEXTILE WORLD and of several books, including "The Principles of Knitting" and "Knitting Full-Fashioned Hosiery."

Walter W. Gayle, 58, vice president of Saco-Lowell Shops in charge of Southern sales, died Mar. 1 at his home in Charlotte, N. C. A graduate of Philadelphia Textile School, he was first employed at Mt. Vernon-Woodberry Mills, Baltimore. In 1917, he became associated with Saco-Lowell as sales engineer with operations centering in Atlanta, Greenville, and Charlotte. In 1926, he was named Southern agent and since then has lived in Charlotte. Recently he was named vice president in charge of Southern sales.

Mortimer Cohn, 45, vice president of Tubular Textile Machinery Corp., Woodside, L. I., N. Y., died Mar. 11. He was with the firm founded by his father for last 20 years.

Henry F. Atherton, 65, formerly president of Allied Chemical & Dye Corp. New York and at his death chairman of its board, died Feb. 10. Mr. Atherton, who had served the corporation since its organ-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the uses of Durene yarns are as limitless as the imaginations of those who style with them
smooth, smooth running Hampton Durene
THE AMERICAN Thread COMPANY · 260 WEST BROADWAY N. Y.
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LOCATE A NEW PLANT IN THAT SECTION OF THE UNITED STATES WHERE CONSTRUCTION AND PRODUCTION COSTS ARE LOWEST
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ADVANCED ENGINEERING
SOLVES THIS PROBLEM
WITH FACTS
Write for an analysis of your particular problem.
No obligation.
The McPherson Co. Greenville, S. C.
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The choice of particular textile mills for dependable service, backed by the experience of 118 years.
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Now you can quickly and easily test moisture content in the range of 0-15% (wet basis). Specifically designed for the textile industry, Model PD-1 makes use of electronic penetration field to test material to average depth of three inches as compared to depth of one inch heretofore.

Duplicable readings are insured by microswitching arrangement which lights meter dial when correct pressure for test is applied. Calibrations for scoured and combed wool, wool yarns and wool blankets are available with instruments.

Similar model available for bulk cotton.

Write to day for complete details. Specify type of material to be tested. Moisture Register Company, Dept. G, 133 North Garfield, Alhambra, California.

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The standard in moisture testing

Fedco Textile Trucks
MADE TO YOUR SIZE

- Vulcanized Fibre
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ESTABLISHED 1902

TEXTILE MILLS • RAYON PLANTS • KNITTING MILLS • DYE HOUSES
BLEACHERIES • STEAM UTILIZATION • STEAM POWER PLANTS
WATER • WASTE DISPOSAL • APPRAISALS • PLANS • REPORTS

NEWS ABOUT *Men* (Continued)

William L. Sweet, 80, former president and chairman of the board of the Rumford Chemical Works, Rumford, R. I., died Feb. 4. Mr. Sweet retired about 10 years ago.

Franklin B. K. Sykes, 47, vice president and secretary of Sykes Bros., Philadelphia, died recently. Mr. Sykes was the son of one of the founders of the firm.

Ralph R. Janes, 60, executive vice president, resident manager and buyer of Roanoke Mills, Inc., Roanoke, Va., died Jan. 24.

Arthur R. Howe, 53, vice president and director of the Ludlow Mfg. & Sales Co., died at Boston Feb. 23. He had been vice president of the Ludlow company since 1935.

Charles A. Walker, 66, for many years active in the textile industry, died recently. He went to Burlington, N. C., in 1902 and was associated with Keystone Finishing Mills. Later he organized Walker Hosiery Mills. He was later in charge of sales at New York for the Gibsonville Hosiery Mills.

J. H. Ledyard, 74, for many years president and general manager of Tupelo Cotton Mills, Tupelo, Miss., died Feb. 13. He was head of the mills from 1905 until they were dissolved in 1937.

Chester C. Woodcock, 56, president of Carleton Woolen Mills, Inc., Rochdale, Mass., died Jan. 22.

Harry Jones, 84, a partner in Ideal Hosiery Mills, Philadelphia, Pa., died Jan. 17 after an automobile accident.

Joshua D. Armitage, a founder of the textile firm of Taylor, Armitage & Eagles, New York, died recently at North Caldwell, N. J. He was at one time associated with the American Woolen Co. and International Cotton Mills.

Jesse M. Williams, 83, Kings Mountain, N. C., former vice president of Dilling and Cora Cotton Mills, general manager of the old Enterprise Mill, a director of Crowders Mountain Mill, and a principal stockholder in the Louise Cotton Mills, Charlotte, N. C., died Feb. 18.

Philip G. McFadden, 71, retired senior partner in the firm of George H. McFadden & Bros., cotton buyers and sellers, died Feb. 8, at Phoenix, Ariz.

Arthur C. Kingston, 72, retired vice president and general manager of Boston Woven Hose & Rubber Co., died Feb. 6. He retired four years ago. He had been with the United States Rubber Co. for 31 years and with Boston Woven Hose Co. for more than 20 years.

Arthur O. Roberts, vice president of Amoskeag Industries, Inc., in Manchester, N. H., died in that city Feb. 1. He was a native of Brooklyn, N. Y., and was associated with the old Amoskeag Mfg. Co. before becoming assistant to William Parker Straw in Amoskeag Industries, which brought many smaller textile industries to Manchester to occupy the mill building of the old Amoskeag firm.

Philip Freeman, 74, founder and senior partner of Queen Knitting Mills, New York, died Jan. 26.

Ludwig F. Reismann, 82, for more than 50 years engaged in the hosiery knitting and hosiery dyeing industries in the Reading, Pa., area died recently. For many years he was interested in Reading Maid Hosiery Mills and in Prospect Dye Works.

James Y. Pharr, of Concord, N. C., purchasing agent of Cannon Mills, was killed in a traffic accident Feb. 12, near Carthage. His wife was also killed in the accident. Mr. Pharr was 62 and had been purchasing agent for the mill for the last 26 years.

John L. Foulke, 48, chief research chemist of A. & M. Karagheusian, Inc., died Dec. 24. He joined the company in 1942.

George Mills, 68, former assistant vice president of William Iselin & Co., Inc., New York, died Feb. 14. Mr. Mills had continued as a special consultant, after his retirement in December, 1945.

Arthur F. Wesley, 49, manager of J. J. Cash Co., Belleville, Ont., died recently.

Stanley Grady, 87, former general foreman at Thayer Woolen Mill, North Oxford, Mass., died recently.

They're all equally as important as mines and rolling mills

TO MAKE MORE STEEL

Half the melting stock used in a steel mill or iron foundry consists of scrap.

In normal times, enough scrap is produced by the mills, foundries, railroads, scrap dealers and fabricators to fill the need.

But although the mills are now working at capacity, the greatly increased demand for steel and castings has outstepped the supply of the heavy scrap that makes the best steel—and at the fastest rate.

The quickest way to increase the production of steel and castings is to increase the supply of heavy scrap.

That is why we are calling on plants in NON-METALWORKING industries to provide the needed heavy scrap NOW.

One million extra tons are needed!

You Have the Heavy Scrap Needed to Make More Steel

Enough obsolete machinery, equipment and parts are being carried as useless inventory in *non*-metalworking plants to give a big push to the production of steel. Surveys have proved this.

The trick is to get that old iron and steel into the hands of the steel producers and foundries.

We're putting that job up to *you*.

To help increase steel production . . . provide more steel for fabricating the equipment you want . . . *to build an emergency reserve for national security* . . . turn in your useless heavy scrap to your local scrap dealer.

What You Can Do to Help Step Up Steel Production

1. Appoint one top official in your plant to take full responsibility for surveying the plant and getting out the heavy scrap.
2. Consult with your trade association's Scrap Drive Committee about its program to help the scrap drive.
3. Call on your local scrap dealer to help you work out a practical scrapping program.

A PUBLIC SERVICE PROJECT — THE ADVERTISING COUNCIL

SCRAPPY SAYS:

Search your plant for HEAVY SCRAP

...Help make MORE STEEL!

TEXTILE WORLD

One of a series *of messages to help you increase your understanding of business paper advertising, and its effect on your job.*

How much would NO advertising cost your company ?

SOME COMPANIES look upon advertising as an expense. When expenses have to be cut, the advertising budget looks like a good place to begin.

The only trouble with that theory is — it won't work.

Advertising can become expensive when you don't use *enough* of it. And "NO advertising" can cost far more than the "saving" it appears to create.

It's like failing to lubricate a piece of valuable machinery. You save the cost of the lubricant — but eventually there's a big repair bill to pay, not to mention your production losses while the machine is idle.

Advertising works something like a machine. It is the application of assembly-line methods to the five basic steps in the manufacture of a sale —

1. **Seeking out prospects**
2. **Arousing their interest**
3. **Creating a preference for your product**
4. **Making a specific proposal**
5. **Closing the order**

Can advertising perform all five of these steps? No, it usually takes a good salesman to handle the last two. But advertising *can* save much of his valuable time.

By mechanizing the *missionary job*, advertising becomes the most efficient method of manufacturing sales at a profit. Especially when it appears in the business press, where it is concentrated among your company's best prospects — *and no one else!*

TEXTILE WORLD

is a member of The Associated Business Papers, who have published an interesting folder entitled, "How much does NO advertising cost?" We'll be glad to send you a copy. Also, if you'd like reprints of this advertisement (or the entire series) to show to others in your organization, just say the word.

SEARCHLIGHT SECTION

FINISHER WANTED

Nationally known textile organization in south wants a qualified finisher who has had experience on flat goods and underwear crepe. Man should have very sound synthetic fabric background. Please write giving full particulars on experience, background, and some indication of salary desired.

P-8208, Textile World
330 West 42nd Street, New York 18, New York

WANTED

JIG DYER

to work on acetate fabrics in modern plant located in upper south. Please outline experience and salary expected in first letter.

P-8157, Textile World
330 West 42nd Street, New York 18, N. Y.

Leading manufacturer of machinery for the paper and textile industries desires a high grade engineering graduate to supervise sales and promotion of new products. The man we want is already engaged in this field of work. Send photograph and full details of experience.

P-8215, Textile World
330 West 42nd St., New York 18, N. Y.

WOOL SCOURER-CARBONIZER

Middle West Manufacturer requires man who is thoroughly experienced in all phases. Permanent full time job. Will help in securing housing. State experience and salary earned or expected in confidential letter addressed to

P-8450, Textile World
520 N. Michigan Ave., Chicago 11, Ill.

WOOL BLENDER WANTED

Must have some experience on Picker, Garnett and Mixer machines. Midwest Manufacturer. Will help in securing housing. Good opportunity. Write in full confidence to

P-8451, Textile World
520 N. Michigan Ave., Chicago 11, Ill.

FOREMAN WANTED

Unusual opportunity for ambitious SK-6 Crompton & Knowles Loom fixer foreman for small modern plant. State age, experience, references.

P-8453, Textile World
330 West 42nd Street, New York 18, N. Y.

FINISHER WANTED

Nationally known textile organization in south wants a qualified finisher who has had experience on flat goods and underwear crepe. Man should have very sound synthetic fabric background. Please write giving full particulars on experience, background, and some indication of salary desired.

P-7509, Textile World
330 West 42nd Street, New York 18, New York

EXPERIENCED DYER WANTED

Good position open in medium size Cotton Bleaching & Dyeing Plant near New York City. Must be experienced in dyeing Vat, Napthol, Sulphur and Direct colors. Write giving full particulars. Replies will be held in the strictest confidence.

P-8473, Textile World
330 W. 42nd St., New York 18, N. Y.

SALESMAN WANTED

Chemical Company wants a Top-Notch Salesman with thorough knowledge of the Weaving and Throwing of Rayon and Acetate and Silk Fabrics. To solicit business on Sizing and Throwing Compounds. Preferably man with Chemical Background.

S.W.-7556, Textile World
330 West 42nd Street, New York 18, N. Y.

Agency Wanted

For import to USA of a special stiff pulp-yarn, needed in the manufacture of carpets, cables, ribbons, elastic bands, braces, lady's hats &c.

AEROFIBER EXPORT AG.
45 Nuschelerstr Zurich 1, (Switzerland)

REPLIES (Box No.): Address to office nearest you
NEW YORK: 330 W. 42nd St. (18)
CHICAGO: 520 N. Michigan Ave. (11)
SAN FRANCISCO: 68 Post St. (4)

POSITIONS WANTED

RESEARCH CHEMIST, Executive, 33. Twelve years experience—major companies—textile processing, synthetic fiber manufacture, preparation and application vegetable proteins, development textile sizes, chemical specialties resins, patents. Offers services to progressive organization where imagination and broad practical background can be utilized. PW 8381, Textile World.

TEXTILE MAN, age 43, with supervisory ability. Experienced in the knitting of rayon, cotton and nylon fabrics. Capable of designing patterns on Scott & Williams, Wildman and Tampkin machines. PW 8428, Textile World.

RIBBON MAN desires position as foreman, 25 years experience in manufacturing departments. Yarn or piece dye. Will consider management of small plants—married—will go anywhere. PW 8294, Textile World.

KNOTTED (FRINGE) Straight Supervisor, capable of building and maintenance over 20 years experience in this line of trimming. PW 8457, Textile World.

SELLING OPPORTUNITY WANTED

SALES AGENT Available. Established electrical and mechanical sales agency covering North-South Carolina desires one or two additional accounts. LeRoy P. Spoon, Electrical Eng., P. O. Box 4036, Charlotte, N. C.

BUSINESS OPPORTUNITIES

New type loom
designed for pick and pick weave without the use of a picker stick. BO 8452, Textile World.

Small jacquard weaving plant
for sale with all auxiliary equipment. Inquiries kept confidential. Parties of financial responsibility may arrange purchase on terms. BO 8456, Textile World.

SPECIAL SERVICE

S-6 Loom Service
We will save you many months of worry and troubles, with our specialized trained mechanics. A few open dates. SS-7766, Textile World.

WANTED

ANYTHING within reason that is wanted in the field served by Textile World can be quickly located through bringing it to the attention of thousands of men whose interest is assured because this is the business paper they read.

RASCHEL MECHANIC

Available April 15. Can make Hair-nets, Polo-Shirts, Veiling, Six Bar Lace; can originate or duplicate patterns. Will relocate.

PW-8442, Textile World
330 W. 42nd St., New York 18, N. Y.

POSITION WANTED

TRICOT EXPERT

Thoroughly experienced with construction and operation of Tricot Machines and in the making of patterns.

PW-7950, Textile World
330 West 42nd St., New York 18, N. Y.

WEAVING TECHNOLOGIST

ENGINEER — graduate Swiss Federal Institute of Technology, also Swiss Textile school. 5 years broad experience in weaving and in laboratories in several countries, now available.

PW-8464, Textile World
330 West 42nd St., New York 18, N. Y.

SWISS COLORIST

SCREEN PRINT SPECIALIST experienced on all textiles, versed in all details and acquainted with AFRICAN and EAST INDIAN ISLANDS items, seeks position. Apply to

PW-8424, Textile World
68 Post Street, San Francisco 4, Calif.

MEN WANTED

POSITIONS OPEN

We can place: SUPERINTENDENT wool scouring and carbonizing; general superintendent group of rayon weaving and throwing mills; woolen and worsted cloth mill superintendents, paying up to $25,000 year; superintendent dyeing and finishing cotton, rayon and nylon underwear and glove fabrics; production manager rayon weaving mill (South); assistant superintendent, sweater mill;

OVERSEERS FOR FOLLOWING DEPTS: woolen and worsted finishing; woolen raw stock and piece goods dyeing, worsted piece dyeing, hosiery and rayon dyeing; overseer of dyeing and finishing combined on worsted piece goods; cotton carding; woolen and worsted weaving burling and sewing; worsted ring spinning frames; woolen spinning, Mid West; weaving elastic warp and elastic filling fabrics; cloth room and warp preparation on filament rayons; cotton spinning (Canada); dyeing and finishing combined, one for woolen mill, one for worsted; weaving jacquard tie fabrics (So. America); full fashioned hosiery foreman or head fixer, salary $5,000-$10,000.

SECOND HANDS FOR FOLLOWING DEPTS: cotton and rayon weaving, Draper and Crompton & Knowles Looms; wet finishing; carding on combed cotton yarns (South).

CHEMISTS and chemical engineers; time study men; industrial engineer salary up to $10,000; salesmen for chemicals, dyestuffs, machinery, supplies, etc.

EXPERT MECHANICS and fixers for Leighton, Wildman, Brinton, Stafford & Holt, Philadelphia jacquards, T. J. circular and Links and Links machines; master mechanics and assistant master mechanics; plant engineers; fixer Draper Modified D looms; fixer Scott & Williams machines; erector woolen cards and spinning frames, South.

We invite correspondence (Confidential) with executives seeking new positions and with employers seeking new personnel.

CHARLES P. RAYMOND SERVICE
Incorporated
Over Fifty Years in Business
294 Washington St., Boston 8, Mass.
Telephones: Liberty 2-6547 - 2-6548

WANTED

SUPERINTENDENT

Superintendent wanted to take full charge of Pa. mill which weaves rayon and cotton fabrics. Varied background in all phases of fabric production necessary. Write fully giving past experience.

P-8264, Textile World
330 West 42nd St., New York 18, N. Y.

PROFESSIONAL SERVICES

LANCASTER, ALLWINE & ROMMEL
Registered Patent Attorneys
Patent Practice before U. S. Patent Office, Validity and Infringement Investigations and Opinions. Booklet and form "Evidence of Conception" forwarded upon request.
Suite 448, 815-15th St., N. W., Washington 5, D. C.

TEXTILE CONSULTANT

specializing in Dyeing, Bleaching, Finishing, Research is open for connection with large organization or group of mills in USA or abroad. Have to offer exceptional experience.

Letters, etc. Address:

PW-8379—TEXTILE WORLD
330 W. 42 St., N. Y. 18, N. Y.

SPOT DELIVERY

POLYVINYL BUTYRAL RESIN
(MONSANTO)

Used for fabric coatings of various kinds
Will accept any reasonable bid — Samples upon request

BENDIX CHEMICAL CORPORATION
420 LEXINGTON AVE. — New York 17, N. Y.

FOR SALE

RIBBON MILL

UNUSUAL OPPORTUNITY

Owner Wishes To Retire

RIBBON, BINDING, TAPE & OTHER NARROW FABRIC MILL & DYE HOUSE

Mill has 68 Fletcher Looms, auxiliary equipment and storehouse, also completely equipped Dye House. Both now in operation. Fluorescent lighting. 5 Room House completely furnished on the premises. All Buildings and Equipment in Excellent Condition. Bldgs. well constructed. 450 Miles from New York.

BO-8330, Textile World
330 West 42nd Street, New York 18, N. Y.

REBUILT

ELLIOT and HALL HOOKER

38" jaws—yard fold—ratchet type—high or low back, as desired.

REPAIR PARTS for E. and H. machines

LET US REBUILD YOUR OLD E. and H. FOLDER

HALL and JANSSON CO.
177 Highland St., Worcester, Mass.

PLANT MANAGER

24 years of experience in fine cotton, rayon, acetate crepe, and spun-synthetic fabrics.

Specialist in fancy fabrics, from designing to economic production. Mill-engineering experience.

Wants position with progressive firm. Best references.

PW-8472, Textile World
330 W. 42nd St., New York 18, N. Y.

FOR SALE

1—16 ft. Narrow Fabric Loom 2 Extra Battams
1—Double Head Quiller

LENDING TRIMMING CO.
61 E. 11 St. — Gr. 3-1553

WANTED

WANTED-CHEMICALS

Dyes—Colors—Pigments
Oils—Waxes—Drugs
By-Products—Wastes—Equipment

CHEMICAL SERVICE CORP.
80C Beaver St. — New York 5, N. Y.

WANTED

Large engineering firm wishes to acquire several complete textile plants through purchase of (1) capital stock, (2) assets, (3) machinery and equipment, whole or in part. Personnel retained where possible, strictest confidence.

Box 1222
1474 Broadway — New York 18, N. Y.

WANTED TO BUY fully equipped woven label manufacturing plant.

Write replies to

LAWRENCE DOMENITZ
Room 1109, 101 West 31st St., New York 1, N. Y.

DYESTUFFS

Will buy your surplus and obsolete dyes and chemicals for cash.

NEW ENGLAND PRODUCTS CO.
91 Oliver St. — Boston, Mass.

COMMISSION WEAVING WANTED

By mill specializing in fine worsteds. Facilities for narrow and wide widths. Warping, slashing and weaving. Sewing if requested.

CW-8219, Textile World
330 West 42nd Street, New York 18, N. Y.

WANTED:

SCOURING BOWLS,

WOOL,

3, 48" wide, 16' long,

preferably Sargent.

W-7947, Textile World
330 West 42nd Street, New York 18, N. Y.

WANTED TO BUY

2—168" 28 gauge Fast Tricot Machines

Either Reiner, Aveco, or Whitin. State lowest price and what year make.

W-8449, Textile World
330 West 42nd St., New York 18, N. Y.

SPRAY PAINTING

One coat covers
Cuts labor costs in half
No interference with production

Inquiries solicited — *References on request*

INDUSTRIAL SPRAY PAINTING CO.
Ceiling areas & chain link fences
WATCH HILL — RHODE ISLAND

WANTED

50" FACE
DUPLEX SANFORIZER with
- FEED-IN NIP ROLLS
- EXPANDERS
- CYLINDERS, ETC.

WRITE BOX JJM 303
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COMPLETE RAYON AND SILK THROWING PLANT

New in operation, 10,000 Sq. feet. 3 years lease. Located in New Jersey—near Manhattan. Owner leaving states.

B.O. 7858 Textile World
330 W. 42nd St., New York 18, N. Y.

WANTED

BRINTON AND SUPREME STATIONARY HEAD

64 Feed machines, all sizes up to 24". Reply giving serial number, cut, type of stop motion, condition and best price.

W-8186, Textile World
330 W. 42nd St., New York 18, N. Y.

WANTED

EXPERIENCED SCOTT WILLIAMS H. H. MACHINE FIXER
Steady Work — Good Pay
State Experience First Letter

W-8444, Textile World,
520 N. Michigan Ave., Chicago 11, Illinois

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Waterfalls were, in the early days, the soundest reason for locating industry. A sound reason for buying machinery and equipment from ◂MLC▸ is the CERTIFIED VALUES we give you—no fancy promises—just good sound value with a powerful lot of service, whether you buy "a crate or carload."

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LEADING TEXTILE CENTERS OF AMERICA

WOONSOCKET, R. I.

The textile industry began in Woonsocket in 1810, thanks to the 30-foot falls of the Blackstone River, when the "Social Manufacturing Company" was formed. The first cotton spinning mill was erected in 1814. A stone mill was put up in 1822 and enlarged in 1842—and since then Woonsocket has forged steadily ahead in its production of worsted and woolen yarns, woolen and cotton goods, cotton yarn and silk.

"Certified for Leadership"

ALL ◂MLC▸ "Certified" Opportunities

No. 10 of a Series

1—72" C & M 2-cylinder Brushing machine
1—39" Textile 5 Roll Calender
1—41¼" Knit goods calender, stainless steel rolls with motor Reeves drive
1—44" 2-roll Schreiner Calender
1—50" 4-roll Rolling and Chasing Calender
1—46" 7-roll Textile Hydraulic Calender
1—47" 3-roll Heavy Duty Friction Calender, motorized
1—51" 11-bowl Hydraulic Chasing Calender, 3 chilled iron steam heated rolls, 7 cotton rolls, one cast iron roll
1—61" Textile 3-roll Calender, gear motor driven with speed reducer
2—New 3-cyl. Set of 60x60 D&F Cards, with .225 breast, Bramwell feed, double apron, tape condensers
5—C&M Flock Cutters
3—48" D&F Rub Condensers, Double Bank, Double Apron with Spool Racks
1—84" x 60" D&F 2-cylinder iron Shoddy Cards with feeders
1—65" C&M Dewing Machine, motor driven
1—52" V.VI Decating Machine with pump, motor driven
4—100 sp. Foster Doublers
1—60" Windle 3C Doubling and Boarding Machine, motor driven
1—84" P&W Doubling & Rolling-up Machine with clock
1—Set of 31-40" face Butterworth Dry Cans
1—Set 30 copper Dry Cans, 23" x 123", in 3 vertical stacks
1—40" Schofield Box Duster with fan
1—48" Schofield Auto. Box Duster
1—Morrison 16 string s/s Dye Beck
1—96" P&S Loop Dryer
2—48" V. VI. Stainless Steel Dye Jiggs motor driven
3—52" Werner 8/8 lined Die Jiggs
1—Set 8 Textile Vertical 48"x23" Copper Dry Cans
1—38" C&M Duster
1—7" D&F Iron Cone Duster with Feeder
8—18", 26", 32", 48", 54", 60" Extractors.
3—40", 42" E&H Flat Folders with take-up stands
1—Rodney Hunt M3, 2 string fulling mill, belt driven
10—40", 85" card and Napper Grinders
1—83" Roy Napper Roll Grinder
4—3-ton Kiers, motors, pumps and heaters
100—10" Draper Model K 20 Har Dobby Looms
99—43¼" reed speed space Model E Draper Automatic Looms with lacey tops 3 bank stop motions, warm take-up, belt driven
58—44" cloth width Draper Mod. E Auto. Rayon Looms, 4 harness cam motions, motor driven, rebuilt 1947.
40—47½" r.s. Draper Model K 20 harness Dobby Looms
35—52" b.s. C&K 2x1 non-auto. Silk Looms, 16 harness, motor driven
17—52" r.s. C&K 2x1 Auto. Silk Looms, 16 harness, motor driven
4—60" r.s. C&K 4x1 Looms, 20 harness dobbies and 1304 hook Jacquards, motorized

PRINTING EQUIPMENT

2—NEW 60" R. B. F. 6 Color Printing machines suitable for large pattern work
2—NEW 50" R. B. F. 12 Color Printing machines
3—66" P&W 60 & 100 yd. Measuring Machines, belt driven
1—70" King & Gerber Tubing Machines with Veeder-Root counter
2—240 SP. J.&B. 1¾ Ga. Mules
1—392 Spindle Smith 2" Gauge Mule
2—240 Spindle J.&B. 2" Gauge Mules
2—New 360 Sp. D&F Mules, 2¼" gauge
2—360 sp. D&F Mules, 2⅝" gauge, 1946
7—61", 66", 72", 80" Single & Double Acting Nappers
1—76" 3-roll Mangle

W-3 LOOMS AND SUPPLIES

45—New 72" W-3 C&K 4x1 box, 25 harness Looms
4—92" C&K W-3 Looms, 25 harness Also shuttles, 8¾" 3-ring Bobbins
5600 Spindle Cotton Mill Balance on 2/10's Combed Yarn
9500 SP. Cotton Mill with 70 Draper Broad Looms
75—New Leland & Westinghouse ½ and 1 HP 3/60/220 V Heavy Duty Motors. Also various size Rebuilt Motors

COMPLETE MILL UNIT PROFIT OPPORTUNITIES

* 3—Six to Fourteen Set Woolen Yarn Mills
* A Woolen Piece Goods Finishing Plant
* 3—Worsted Units
* 6—Cotton Mills, 3,000-100,000 Spindles
* 105 Looms Narrow Fabric Weaving Plant for Ribbons, Tapes and Labels. Complete with Warping, Dyeing and Finishing Equipment
400 Needle Hosiery Mill
30 Loom Label Weaving Mill

1—30 x 30" Mezerra Wool Opener
1—48" D&F 2-cyl. Wool Opener with Feeder
7—52", 65½", 66", 70", 86" Voelker and Gessner, single and double bed Rotary Cloth Presses.

PRICED RIGHT

96—Hopedale Rayon Looms weaving 40" width cloth, motor driven. Reconditioned 1947.

1—48" C.D. Sargent Burr Pickers
58—43" r.s. Draper Model X Looms, with 39" sand rolls, Brown 4 harness tops, motor Driven
12—70½" r.s. C&K 4x4 Looms, 25 harness, motor driven
6—82" C&K 4x1 Auto. Looms, 16 harness, motor driven
1—Schofield Lumber
1—48" C&K 4x4 box Loom, 25 harness, belt driven, friction clutch
14—54½" C&K Box 20 & 25 Harness Dobby Looms
2—74" Heavy Duck Looms, roller top
14—82" C&K 2x1 automatic Looms, 8 harness cam motion, motor driven
8—100 C&K 2x2 Box Auto. Looms with Baker 3-mix attachments, 25 harness gem heads
6—110" C&K 4x4 Box Looms, 25 harness, belt driven
20—C&K 22" Ribbon Looms with intermediate gem heads, belt driven
3—18" & 54" Fearnaught Pickers
1—66" Rodney Hunt 2-roll Padder, motor driven, 1947
1—Rodney Hunt Acetate Presetting Equipment
4—45" 2 and 3 roll Padders.
1—72" 2-roll Quetch with flat folder, Reeves drive and motor.
4—50 spindle Lindsey-Hyde Adjustable Reels
5—82", 92", 96", and 100" D&F Pin Type Reels, with creel, back stand, neck reed, warp reel beamer and warp compressor
1—50" Herman Shear with C&M Stitcher
1—63" Textile Finishing 4-burner Gas Singer
1—117" 4-burner Singer, air guiders, 2-roll quetch box
8—New 120 sp. D&F 6½" gauge spinning Frames
14,268 sp. Mason, Whitin, F&J and Saco-Pettee 2¾" and 3" gauge band driven Spinning
3—60" P&W Single Blade Woolen Shears
1—66" Parks & Wilson single Blade Plush Shear
11—66½" P&W 2-blade Shears
1—76" C&M Double Blade Shears
1—80½" P&W Single Blade Shears
1—66" Johnson 7-can Silk and Rayon Slasher, with s/s drums, quetch, stretch control, Taylor instrument control on the cylinder, motor driven.
1—Cameron Model 26 Slitters, motor driven
1—42" Firsching 20-knife Slitting Machine
2—Lowell 2-cylinder Slashers
1—40' Textile Clip Tenter, 60" opening with Housing
1—60" C&M Single Brush type Tiger
1008 sp. S.L. 3" Ring Band Driven Twisters
3—80 Spindle Hopedale Band Driven Twisters 4½" ring, 5⅝" ga. Belt driven
1—220 sp. Draper 2" ring Wet Twister, with 500 new bobbins
2—8-string Hemmer Wool Washers
7—100 Sp. Foster Model 12 12A 21A Tube & Cone Winders
1—90 Sp. Foster Model 30 Cone Winder

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SPECIALISTS IN SELLING AND PURCHASING TEXTILE MACHINERY, ACCESSORIES AND MILL SUPPLIES

OPENING, CARDING & SPINNING

1—Baling Press with motor, 28x60x40
4—Saco-Lowell 40" Cards, 27" doffer, 12" coiler
22—Dobson & Barlow Cards 41", 24" doffer
50—Cotton Cards, 50", 12" coilers, 110 flats
7—Whitin Roller Cards 48", 27" doffer
14—Whitin D2 Combers, 12" coiler, 8 laps per
22—Whitin D Combers, 8 heads, stop motion
12—Whitin Drawing, Model H, 6 del. ea., 12" coilers
4—Saco-Pettee Fine Frames 7x3, 176 spdls.
2—Saco-Lowell F5 Feeder Hoppers
1—Kitson F-2 Feeder Hoppers, 38½"
34—Saco-Pettee Spinning Frames, 256 spdls., 2¾" gauge, Roth L.D.
75—Whitin Spinning Frames, 264 spdls., 3½" gauge, Casablanca L.D.

WARPING AND WINDING

1—Schweiter Winder
1—Sipp-Eastwood, pin Creel, 4½" gauge
1—New Reiner Magazine Creel, 280 ends
1—French Worsted Doubler, 100 spdls., motor
2—Foster #101, 80 spdls. cone, w/motor
1—Draper Warper w/creel, 570 ends, motor

COMPLETE MILLS

Sheeting and Print Cloth Mill 8,000 spdls., 210 looms.
Cotton Yarn Mill, 5,000 spdls.
Worsted Yarn Mill, 3,400 spdls.
Woolen Blanket Mill with building & ground.
Worsted & Woolen Weaving Mill, 100 Looms.
Rayon and Silk Weaving Mill, 40 Looms.
Terry Towel & Novelty Rug Mill.
Carpet Yarn Mill.
Rayon Finishing & Printing Plant.
Cotton Spinning Mill, 12,000 spdls.

LOOMS

140—Draper K, 40" w/motor
28—C & K W-3, 72", 4x1 w/motor
20—C & K C-4, 60" auto. w/motor
16—C & K 92", 4x1 auto. belt
68—Draper X, 43" r.s. auto. w/motor
4—C & K W-3, 92", 25 harness w/motor
24—C & K 4x4, 92" non-auto.
100—C & K S-5, 56", 2x1 auto.
150—Stafford 56", 2x1, non-auto.

PRINT MACHINES

1—Rice, Barton & Fales, 10 color, Ribbon machine, 12"
2—Rice, Barton & Fales, 6 color, 60" wide.
2—Rice, Barton & Fales, 12 color, 50" wide.
1—Rice, Barton & Fales, 4 color, 45" wide, with dry Cans.

DYEING & FINISHING

1—Winsor & Jerauld Tenter Frame, 20' 62" wide
9—Dye Becks, S.S. lined, S.S. reels, capacity 1000 gal to 3500 gals, ind. motors
1—Boil-off Unit, S.S., 2 sections
1—V.V. Calender 48" wide, 3 rolls
1—Butterworth Calender, 60" wide, 5 rolls
1 set 9 Dry Cans, S.S. 72" wide
2—Cottage Steamers, 16' long
1—V.V. Semi-Decator, 52"
1—Gessner Decating, 72" with winder
1—90" swing Tenter Frame, with winder, 50"
1—P & S Skein Dryer, 4 units, w/motor
1—Smith-Drum Skein Dyer, pump, motor, 60 arms
1—P & S Loop Dryer, 30' long, set-up
1—Sargent Raw Stock Dryer, 72" wide
2—V.V. Dye Jiggs, 45" S.S. tubs w/motor
4—Morrison S.S. Dye Jiggs, 50" w/motor
1—Caraganaro Embossing Calender, 60" width
1—V.V. Centrifugal Extractor, 60" w/motor
1—Vacuum Extractor 60" w/Hytor pump
1—Tolhurst Extractor, 48" copper basket
3—Werner 2-roll Quetches, 50"-60"
1 set 34 Dry Cans, 43" wide, 4 stack w/motor
1—Water Mangle, 50"
1—Open Soaper iron, 2 sets nip rolls 44" wide
1—W & J Tenter Frame 40'x54", stainless steel clips w/motor

REMEMBER Republic Textile EQUIPMENT COMPANY
40 WORTH STREET NEW YORK CITY
Purchase and Sale of Used Machinery
REFINANCING • APPRAISALS • PURCHASE • SALE • LIQUIDATION OF MILL PROPERTIES

TYPICAL Eagle Economy OFFERINGS
IN EXCELLENT MACHINERY AND COMPLETE PLANTS

DYEING, FINISHING AND PRINTING MACHINERY

1—V. V. Tenter Frame, 30', 60" wide, S. S. clips.
1—MORRISON 50', 60" wide Tenter Frame, S.S.
1—Extractors, 42" to 72", motor driven
3—PROCTOR & SCHWARTZ Loop Driers, 20'-40' long, M. D.
1—Drier, Sargent, 4 section, 3 apron type, Andrews and Goodrich heating unit
1—TEXTILE Hydraulic Calender, 42" wide
1—Butterworth Calender, hydraulic 7-bowl, 80"
2—WOONSOCKET Nappers, D. A., 82", 36 rolls
2—C. & W. Shearing Machines, 60" wide
2—PHILADELPHIA Skein Driers
15—Sets of Dry Cans, S. S. and Copper from 6 cans to 50 cans; 50" to 144" wide
1—V. V. Quetsch, 60" 2 roll M. D.
3—Verduin Jiggs, 60"-70" stainless steel
1—TEXTILE AGER, 18' long, 60" wide
2—V. V. DECATORS, 1 BRAND NEW 72" wide
1—Morrison 16 string S. S. Dye Kettle. (1947)
1—Smith Drum 3 tube Skein-Dyeing Mach. (1947)
3—Print Machines, R.B.F., 44" to 62"
1—V. V. Palmer Quetsch-60"
1—V. V. Palmer Quetsch Tenter 45"
1—P. & W. Doubler and Folder, 72" (1946)

WEAVING AND SPINNING

WEAVING PLANT
12—C&K W-3, 82" 4 x 1 Looms
1—Dresser; Jack Winder
2—Universal Winders
All Necessary Equipment

LOOMS—SPECIAL
64—C & K S-6 Silk & Rayon, 1949 DELIVERY JUNE & JULY
70—C & K C-4, 64" looms, Complete

75—S-3, C&K, 56" 2x1
45—S-4, C&K, 54", 4x1
300—C. & K. looms, 52" to 100", W-3, 4x1, 4x4, 2x1
48—C&K 100 Draper Mod. D., 50"
60—Draper Model E 45"
500—Draper Model E 40"
24—WHITIN Spinning Frames, Long Draft
40—Whitin, Woonsocket and Plait Cards, 40"
2—BARBER-COLMAN Warp Tying-in Machines, Model J16, size 4): 1-4E and 1-6E
1—Barber-Colman Tying-in Machine, L. S. (1946)
4—WINDERS, Models 101 and 102

WORSTED AND WOOLEN EQUIPMENT
2—WHITIN Cards, 60", 3 cylinder, tape condenser
1—D. & F. Card, 60" 3 cylinder tape condenser
8—D. & F. Worsted Cards, 54" wide, 2 cylinder
*All above cards have iron cylinders
8—D. & F. Spinning Frames 120 sp., 6½" ga. (1946)
4—PRINCE-SMITH Twisters
14—D. & F. Mules large package, 360 sp., 2½" ga. (1947)

COMPLETE COTTON MILLS
5,000 to 30,000 spindles: conventional, long draft, combed and carded with and without weaving.
COMPLETE WOOLEN AND WORSTED MILLS
We are interested in purchasing Single Items to complete plants.
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Financing, Appraisals and Liquidations of Mill Properties

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AVAILABLE IMMEDIATELY
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Item 12571
3 Cylinder Plush Shear Parks & Woolson—66"
Belt Drive
Includes belt guards & dust collecting hoods over each cylinder.

Item BH-NH
12 Bahnson Humidifiers
220 V Motors

Contractors Equipment Available
at our Norwood, N. C. Plant such as Concrete Mixer, Saw Mill, Water Pump, Drum Hoist. Other Small Tools used around Mill Village.

Item N-H
2 Derby Doublers or Sliver Lap Machines
Making a 20" Lap

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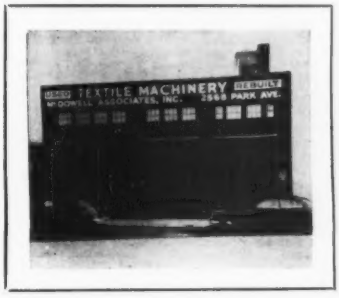

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1—DYE KETTLE S.S. enclosed 6'
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1—SKEIN DYEING MACHINE monel metal, 10 arm
4—EXTRACTORS 32"—40"—48"—60"
1—VACUUM EXTRACTOR 78", pump and motors
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1—FULLING MILL double compartment, motorized
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2—NAPPERS 72"—80" S.A. 14 roll
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2—NAPPERS 90" D.A. 36 roll
1—ROTARY STEAM PRESS 68" Double Bed
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1—SHEAR 4 blade 60"
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3—SHEARS 66½" double blade
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5—POLISHING and THREAD DRESSING UNITS 36"
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1—PRINT MACHINE 2 color 44"
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14—C&K 92" LOOMS 4 x 4 30 harness, motorized

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1—DRESSING REEL 110"
1—D&F FEARNAUGHT PICKER
1—SARGENT 6' CONE DUSTER
4—VERI-BEST 92" LOOMS Automatic
4—AUTOMATIC 82" LOOMS
4—WOOL CARDS 3 cyl. 48 x 48 Tape Condensers

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1—KENYON 72" PIN DRYER
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1—NAPPER 80" 24 roll
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2—SHEARS single blade 66"
2—SPOOLERS 32"
4—REELS pin type 72"—82"
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1—5-Section Crabb.
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1—Set of 6 copper cans, vertical, Reeves 6 motor.
1—Set of 7 copper cans, horizontal, Reeves 6 motor.
1—Set of 3 copper cans, 36" diameter by 60" face.
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1—Set 34 Copper Cans, 50" stands, siphoned
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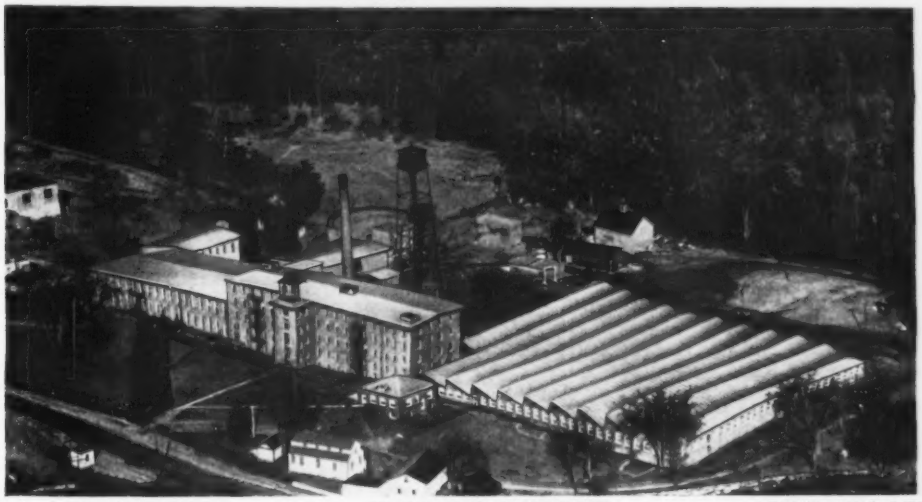

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2—Whitin 12 x 6 Slubbers, 68 spindles

4—H & B 12 x 6 Slubbers, 64 spindles

5—Whitin 10 x 5 Intermediates, 108 spindles

8—H & B 10 x 5 Intermediates, 3-108 spindles, 5-88 spindles

3—Woonsocket 10 x 5 Intermediates, 2 - 102 spindles, 1 - 96 spindles

30—7 x 3½ Speeders, Whitin, H & B and Woonsocket, 6-176 spindles, 24-160 spindles

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4—Whitin Model B Tape Drive Spinning Frames, 216 spindles, 3¼" gauge

61—H & B Band Drive Spinning Frames, 56-240 spindles, 5-192 spindles, 3½" gauge

75—Whitin Band Drive Spinning Frames, 18-256 spindles, 57-240 spindles, 2¾" gauge

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1—Entwistle High Speed Warper, with Foster 468-end Magazine Creel

1—Saco-Lowell High Speed Warper, with 462-end Magazine Creel

2—Universal #44 Roto Coners, for wooden cones, 6" traverse, motor driven

4—Universal Model 60-GF Winders, 96 spindles, 2-paper cones, 2-wooden cones, 1-motor driven, 3-belt driven

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2—Lowell Slashers, 5' and 7' cylinders, 61" headway, 11-beam creels

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2—L. & G. Chenille Cutters

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1—Hunter No. 10 Fulling Mill
1—Fletcher 60" Mtr. Dr. Extractor
3—Tolhurst Mtr. Dr. Extractors 72"-96"
1—Butterworth Rope Squeezer
1—C. & M. 170" Rolling Teasel Gig
1—P. & W. 66" Double Shear
1—P. & W. 66" Plush Shear
1—Gessner 66" Heavy Duty Press
1—Voelker 66" Double Bed Press
1—P. & W. 66" 4 cyl. Brush & Sander
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1—K. & B. 72" Full Decator
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8 Mod. D Looms 82" cloth, 2x1 with Gem Heads.
24 C&K S-5 Looms 56" B.S., silk & rayon, 12 have S-6 clutches, 20 harness, 220 volt.
1 Johnson 6 arm Rayon Tinting & Soaking Mach.
54 C&K 2x1 Looms 54" B.S. 20 harness, non-auto. motor driven 220 volts.
3 S-P Inter. Frames 10x5—96 spdles, age 1910 overhauled.
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6—Textile Machinery Works "Reading", 51 gauge, 30 section single unit Leggers, with all latest attachments, installed August, 1947, through February 1949, serial No. 13908-14042-14491-14612-14672-14838. Lot No. 19515.

2—Kurt Lieberknecht Inc., 51 gauge, 32 section Leggers, single unit type with auto welt, and all other latest attachments, installed late 1948, serial numbers 1997 and 2049. Lot No. 19514.

8—Textile Machine Works "Reading", 51 gauge, 26 section single unit Leggers, short needle, high speed, all usual attachments, including 30 movement Lace (2 machines also have striping attachments) and 2 machines have covering attachments available (for mesh). Serials 12168-12369-13428-13427-13011-13010-12954. All single needle bar type, installed July, 1939, through July 1942. Lot No. 19516.

2—Schubert and Salzer, 51 gauge, 20 section loopers, in clean shape, serials 99077-99078. Lot No. 19517.

4—Textile Machine Works, "Reading", 45 gauge, 26 section single unit Leggers, short needle, high speed, installed late 1938, 2 machines have striping attachments available, serials 11839-11841-11842-11845. Lot No. 19518.

6—Schubert and Salzer 48 gauge, 24 section single unit leggers, with all usual attachments, including lace tackle, type HSL machines, serials 112426-112649-112429, 112012-112011-112010. Lot No. 19519.

1—Kurt Lieberknecht (USA) Kalio 48 gauge, 24 section, single unit Legger, all usual attachments, including lace, serial 1881, New Nov. 1934. Lot No. 19520.

4—Schubert and Salzer, 45 gauge, 24 section single unit Leggers, with all usual attachments, including lace, tackle, serials 112897-112896-112945-112579. Lot No. 19521.

3—Kurt Lieberknecht Inc. (USA) Kalio 45 gauge, 24 section, single unit Leggers, with all usual attachments, including lace, new 1934, serials 1178-1179-1180. Lot No. 19522.

2—Textile Machine Works "Reading" Footers, 51 gauge, 30 sections, short needle high speed, 10" needle bars, serials 11941-12257. Lot No. 19523.

2—Schubert and Salzer "HSL" footers, 48 gauge, 24 section, with usual attachments, serials 112430-112013. Lot No. 19524.

MEN'S CIRCULAR HOSE MACHINES

21—S&W Komet Links Links 4", 163 needle, all latest attachments (new 1947-48). Lot No. 19361.

40—Banner Wrap and Reverse Plait, 3½", 160 needle, 36 gauge, with rubber top, stripers, Serial range 94500, practically new. Lot No. 19360.

34—S&W HH, 3¾", 178 needle, 36 gauge, new style dials, serial range 143000. Not No. 19362.

MEN'S HOSE

12—S&W HH PW—Latest style, 3½" 200 N., Color in Color. At list price. (Lot No. 18277)

22—S&W HH PW's, 3½" 220 N., with Rubber Tops. (Lot No. 18210)

16—Banner Wrap Reverse Plait Mach., Late Model, 3½", 120 Needle. (Lot No. 18467)

10—S&W Komets, 3½", 200 N., with rubber attachments. (Lot No. 18678C)

8—S&W Komet Links & Links, 4" 176 N., rubber layin, Tipper and Lap Control. (Lot No. 18126)

36—Komet Links & Links, 150 N., 4" Cylinder Machines. (Lot No. 18671)

24—S&W HH PW, 3½", 220 N., with rubber tops, 48 Ga. (Lot No. 18139)

12—Banner Wraps, 3½", 200 N., with rubber tops, Low Cylinder. (Lot No. 16555)

4—Spiers Autoswift Double Cylinder Rib Machs., Late Type, 4", 168 N. with rubber attachments and splicing for Heel and Toe, full automatic. (Lot No. 17796)

10—Keller Model D, 3¾", 176 N., with rubber tops. (Lot No. 18647)

13—S&W HH Spirals, 3½", 220 N., 48 Ga., 25 step, 96 rack, Mock Wrap. (Lot No. 18209)

30—S&W HH Spirals, 3½", 220 N., 48 Ga., 96 rack with striper attachments. (Lot No. 29080)

45—S&W HH Spirals, 3½", 176 N., 13 step. (Lot No. 19058)

10—S&W HH's, 3½", 164 N., with New Style Heads, Stripers, 5 Step Reverse Plait. (Lot No. 17373)

20—S&W HH's, 3¾", 176 N., with New Style Heads, & New Cyl. and Dials. (Lot No. 18316)

12—S & W B-5's, 3½", 130 N., 36 Ga., with Rubber Tops and Stripers. (Lot No. 17260)

15—S & W B-5's, 3½", 150 N., 36 Ga., with Rubber Tops and Stripers. (Lot No. 17260)

45—S & W B-5's, 3½", 200 N., with Rubber Tops and Stripers. (Lot No. 17827)

22—S & W B-5's, 3¾", 108 N., 18 Ga., Set up on transfer work, with stripers. (Lot No. 18112)

16—S & W B-5's, 3¾", 160 N., with Rubber Tops, and Double Sole Attachments. (Lot No. 16945)

7—Standard H's, 3½", 128 N., with 3 rubber attachments. (Lot No. 16954)

30—S & W RI's, 3½", 160 N., with Rubber Top attachments. (Lot No. 18319)

40—S & W RI's, 3¾", 176 N., 36 Ga., with rubber tops and stripers. (Lot No. 17782)

25—12—3¾", 124 N., S & W RI's, 24 Ga., with Stripers and Lay-in Attachments. 2—4", 132 N., S & W RI's, 24 Ga., with Stripers and Lay-in Attachments. (Lot No. 18173)

9—S & W B-5's, 3¾", 84 N., 18 Ga., (Lot No. 16488)

20—S & W K's, 3¾", 120 N., with Cushion Sole and Rubber Tops. (Lot No. 17725)

18—Banners, 3½", 176 N., High Cyl., with Rubber Tops and Drop Stitch. (Lot No. 17690)

12—S&W B-5's, 3½", 130 N., 36 Ga., with Rubber Tops and Stripers. (Lot No. 17260)

15—S&W B-5's, 3½", 150 N., 36 Ga., with Rubber Tops and Stripers. (Lot No. 17260)

45—S&W B-5's, 3½", 200 N., with Rubber Tops and Stripers. (Lot No. 17827)

22—S&W B-5's, 3¾", 108 N., 18 Ga., Set up on transfer work, with stripers. (Lot No. 18112)

16—S&W B-5's, 3¾", 160 N., with Rubber Tops, and Double Sole Attachments. (Lot No. 16945)

7—Standard H's, 3½", 128 N., 3 with rubber attachments. (Lot No. 16954)

30—S&W RI's, 3½", 160 N., with Rubber Top attachments. (Lot No. 18319)

40—S&W RI's, 3¾", 176 N., 36 Ga., with rubber tops and stripers. (Lot No. 17782)

25—12—3¾", 124 N., S&W RI's, 24 Ga., with Stripers and Lay-in Attachments. 2—4", 132 N., S&W RI's, 24 Ga., with Stripers and Lay-in Attachments. (Lot No. 18173)

9—S&W B-5's, 3¾", 84 N., 18 Ga., (Lot No. 16488)

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18—Banners, 3½", 176 N., High Cyl., with Rubber Tops and Drop Stitch. (Lot No. 17690)

CHILDREN'S HOSE KNITTERS

3—S&W Komet Links Links 3", 168 needle, 48 gauge. Lot No. 17982.

12—S&W Komet Links Links 3¼", 186 needle, 48 gauge. Lot No. 17983.

9—S&W Komet Links Links 3½", 200 needle, 48 gauge. Lot No. 18250.

5—Standard H, 2", 160 needle, 70 gauge. Lot No. 19490.

8—Standard H, 2¼", 180 needle, 70 gauge. Lot No. 19490.

6—Standard H, 2½", 200 needle, 70 gauge. Lot No. 19490.

LADIES CIRCULAR KNITTERS

150—S&W Dancing Twins 3¾", 400 needle, all usual attachments (except patented devices), new 1947, perfect shape. Lot No. 19564.

128—S&W Dancing Twins 3½", 370 needle, exactly as above. Lot No. 17973.

60—S&W Model K, 3½", 320 needle, 70 gauge, cradle sole, etc. Lot No. 16878.

100—S&W Model K, 3½", 340 needle, 70 gauge, all usual attachments. Lot No. 18770.

60—S&W Model K, 3½", 300 needle, 70 gauge, as above. Lot No. 16882.

30—Fidelity 3½", 400 needle, "Electronic" machines (6 months old). Lot No. 18294.

40—S&W Model K, 3½", 260 needle, 54 gauge, cradle sole, graduated stitch, etc. Lot No. 19341 A.

80—S&W Model K, 3½", 240 needle, 54 gauge, as above. Lot No. 19341B.

24—S&W Model K, 3½", 240 needle, 54 gauge, as above. Lot No. 19341C.

50—S&W Model K, 3¼", 260 needle, 54 gauge, cradle sole, graduated stitch, picot, etc. Lot No. 19341D.

NYLON AND SILK THROWING MACHINERY

16—Atwood Model C Double Deck Up-twisters, 2 have 200 sp. balance have 208 spindles each. Motor driven, 3 phase, 60 cycle, 220 volts, 3¼" cork take up rolls, swing spindles, "A" blade. Lot No. 19536.

2—Atwood "Monarch" 5B doubler twisters, 88 spindles each, with double 2" take up rolls. Eadie rings 2⅞" diameter swing spindles, 5" space, 7" traverse capacity, 8 pin creels individually motor driven. Lot No. 19538.

1—Lydon Electric steam conditioning and twist setting oven, new 1948, serial No. 1702, inside dimensions, approx. 70"x60"x50". Lot No. 19542.

36—Universal No. 50 coners, 6 spindles, per gang, with gear gainers, pineapple attachments, emulsion troughs, 5" traverse, 3-30, (6 have L drives, balance regular clutch drives) motor driven in sets of 2 gangs per motor. Lot No. 19543.

1—Complete Nylon sizing set up, including: 12—Universal No. 2-08 sizing winders, 6 spindles per gang, set up with four available sized emulsion drives, and two circulating systems, mounted on two lines with individual motors for each line.
1—Complete Carrier air conditioning system for 6500 sq. feet, in use with above sizing machines.
3,000 (approx)—Nylon sizing and redraw tubes.
21—self stacking racks for tubes. Lot No. 19544.

LOOPERS, SEAMERS, ETC.

3—Setco 18 point loopers. Lot No. 19131.

30—Setco 24 point loopers. Lot No. 18951.

11—Setco 40 point loopers. Lot No. 19082.

29—Singer 242-1 High speed seaming machines for full fashion hose, complete with individual motor driven tables, most purchased new 1946-1949. (a few are 1941-42). Lot No. 19527.

7—Union Special 41300 class High Speed Seamers, with ratio control, and individual motor driven tables, serials 290414 through 316425. Lot No. 19528.

8—Setco 30 point loopers, complete with chain clippers. Lot No. 19530.

8—Setco, 32 point loopers, complete with chain clippers. Lot No. 19531.

2—28 point Setco loopers, complete with chain clippers. Lot No. 19532.

12—Textile Machine Works "Reading" Inspecting tables, double type, air operated, new 1941, through 1948. Lot No. 19534.

CIRCULAR KNITTING MACHINERY

4—16", 14 cut, 16 feed, with pattern wheels, and mechanical stop motions, Serial Range 2000. Lot #17483.

1—18", 16 cut, 24 feed, mechanical stop motions with pattern wheels. Lot #17485.

2—20", 20 cut, 48 feed, type RPM, Wesco electric stop motion, with individual motor drive. Lot #17475.

1—24", 20 cut, 64 feed Brinton, with mechanical stop motions. Lot #18978.

1—24", 22 cut, 64 feed Brinton, with mechanical stop motions. Lot #18978.

1—12", 8 feed, 14 x 14 cut, circular machine. (Lot #12941)

1—12", 8 feed, 14 x 14 cut, circular machine. (Lot #12846)

5—15", 12 cut, equipped with electric stop motions. (Lot #17918)

2—17", 12 cut, equipped with electric stop motions. (Lot #17918)

2—20", 12 cut, with electrical stop motions. (Lot #12952)

1—13", 8 feed, 10 x 10 cut, circular machine. (Lot #11587)

4—13", 8 feed, 10 or 12 cut, circular machines. (Lot #17871)

1—13", 8 feed, 14 x 14 cut, circular machine. (Lot #12942)

1—14", 12 cut, circular machine. (Lot #18300)

2—15", 8 feed, 10 or 12 cut circular machines. (Lot #17873)

2—18", 24 cut, 48 feed Supremes, with mechanical stop motions. (Lot #18975)

1—20", 20 cut, 64 feed, type MJ, with mechanical stop motion. (Lot #17302)

3—20", 22 cut, 64 feed, Type MJ, Wesco electric stop motions, individual motors, built 1948. (Lot #17476)

3—24", 14 cut, 48 feed, with extra cylinders, 18 cut with pattern wheels, Crawford electric stop motion. (Lot #17488)

DYEING AND FINISHING EQUIPMENT

7—Proctor and Schwartz Model D-30 Boarding machine complete. Lot No. 18141.

2—Paramount Model 22 Preboarding Retorts. Lot No. 17992.

1500—Paramount Boarding Forms for men's, women's and children's hosiery.

1500—Philadelphia Boarding Forms for men's, women's and children's hosiery.

EXTRACTORS

1—26" Fletcher Extractor, Motor Driven, Rebuilt, Safety Cover. (Lot 17014)

1—30" American Curb Extractor, Rebuilt Motor Driven, Safety Cover. (Lot 17021)

1—40" Tolhurst Extractor, Motor Driven, Used. (Lot 12704)

2—40" Zephyr Extractors, Stainless Steel Basket, Safety Cover, Automatic Timing Device, Rebuilt. (Lot 14702)

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1—CALENDER, 50" Perkins Hydro 100 T 3 roll
1—CARD, 60x80 3 cyl. Iron Whitin '26 brst
1—CONDITIONING Machine Instrum 70" face
1—DOUBLING Meas & board Mach P&W 66½" mtr.
16—DRY CANS, 23"x56" Vert. Tnd copper w. drv.
1—DRYER, P&S 4 section, skein, yr. 1936
3—DYE JIGGS 48" VV SS lined drvn by 1 mtr.
1—EXTRACTOR 42" copper S&U vert. self bal.
1—EXTRACTOR 8 basket Indiv. Pkg. Smith-Drum
2—INSPECTING & Rolling Mach. 96" BB st. rolls
96—LOOMS, 40" cloth, Draper Rayon Auto. mtr.
20—LOOMS, 42" C&K 4x1 auto. 20 harn. mtrs.
45—LOOMS, 54" R-4 20 h. dob. 4x1, 2x1 mtr.
150—LOOMS, 56" R-5 2x1 Auto. mtr. drvn.
75—LOOMS, 56" R-3 1937 C&K gem 20 h.
5—LOOMS, 64" RS Crompton 2x1 Non-Auto. mtr.
28—LOOMS, 72" W3 4x1 mtr. 25 h. auto let off
24—LOOMS, 81" RS Draper Mod D 2x1 gem 20 H. sr.
8—MULES, 320 sp. J&B lg. pkg. 13⅜" bobbin mtr.
11—MULES, D&F 1⅝ and 2⅛ gge 360 & 330 sp.
1—NAPPER 80" Woonsocket 24 roll dble act. mtr
2—PICKERS 24" Dodge Rag Pickers mtr ball brg
1—PRESS Voelker 60" dble bed 16" cyl belt dr
2—PRINTING Machines 2 color 60" with motors
1—QUETCH 50" 3 bowl rubber rolls screw & lvr
1—SCOURER 2 bowl P&S wool skeins 5 HP mtr.
1—SLITTER Cameron K-100 10 gas heated knives
1—SQUEEZE Roll set 8x72" rubber, 2 rolls
1—SOAPER Unit 3 sections 3 sq. rolls
68—SPINNING Fr. LD 2¼ rg. H&B 3" gge.
12—SPOOLERS S-L 100 & 120 sp. ea. mtr & belt
1—TENTER Frm 54'x72" mtr. drvn. W&J
1—TWISTER 160 sp. Collins 3½" rg. 5" gge. 8" trv.
2—TWISTERS Whitin 104 sp. ea. 4" vertical ring, 5⅝" gge, tape driven
2—WARP TYING Model K Portable B-C, re-built
1—WARPER 84" Sipp E. mtr. low beamer
2—WARPERS B-C HS, 1936, 432 ends, 500 YPM
2—WINDERS Foster #101, good condition
16—WINDERS #50 Univ. with 1 HP GE mtr. cone
3—WINDERS, Whitin Schweiter, Quill, Type MS
1—WINDER, Schweiter SR-3 11 sp. dble sided
1—WINDER, #30 Univ. 16 sp. coning machine
62—WINDERS #90 Univ. under sply disc tensions
4—WINDERS Sipp Skein mtr. drv. 80 sp. ea. setts
2—WINDERS #30 100 sp. Foster, mtr. cone
1—WINDER Univ. #60 GF 96 sp. cone 3 HP mtr.
4—WINDERS, Abbott Traveling Cone Wndrs. 80 spdles each

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12—LOOMS, 92" Verihest C&K 25 h. mtrs. complete.

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INDEX TO ADVERTISERS

An * Indicates additional data is in the 1948/49 Pre-Filed Textile Catalog and Textile World Yearbook

*Abbott Machine Co. 128
Acme Knitting Mach. & Needle Co. 309
Aldon Spinning Mills 307
Alemite Div., Stewart Warner Corp. 140
Allen Bradley Mfg. Co. Inside Back Cover
*Allen Co. 12
Allentown Bobbin Co. 312
*Allis-Chalmers Mfg. Co. 76, 77
*Aluminum Co. of America 303
Ambler Textile Machy. Co. 314
Amercoat Div., American Pipe & Construction Co. 21
American Air Filter Co., Inc. 232
American Cyanamid Co., Textile Resin Dept. 247
American Gas Ass'n. 251
*American Lava Corp. 217
*American Monorail Co. 38
American Steel & Wire Co. 89
American Thread Co. 317
American Viscose Corp. 207
American Woolen Co. 309
American Yarn & Processing Co. 314
Ansul Chemical Co. 228
Arkansas Co., Inc. 233
Armco Steel Corp. 269
Armour & Co. 253
*Armstrong Cork Co. 10, 11, 149
*Ashworth Bros., Inc. 46
Atkinson-Haserick Co. 32, 33
Atlantic Rayon Corp. 288
Automatic Transportation Co. 282

*Bailey, Frank 316
*Barber Colman Co., Textile Div. 305
Barco Mfg. Co. 273
Barnes Textile Associates, Inc. 306
Bemis Bro. Bag Co. 284
Bijur Lubricating Co. 249
*Blickman Inc., S. 291
Boger & Crawford 189
*Booth Co., B. 260
Borne Schrymser Co. 313
*Boston Woven Hose & Rubber Co. 69
*Boulin Instrument Co. 304
Breuer Electric Co. 302
Briggs-Shaffner Co. 308
*Brinton Co., H. 214
Brostites Mach. Co. 248
Brown Instrument Co. 72
Bryant Chemical Co. 265
Buffalo Forge Co. 279
*Butterworth & Sons Co., H. W. 211

*Caldwell Co., W. E. 311
*Cameron Machine Co. 239
Carnegie-Illinois Steel Co. 89
*Carter Traveler Co., Div. A. B. Carter, Inc. 334
Celanese Corp. of America 212
Century Electric Co. 87
*Chicago Pneumatic Tool Co. 275
Ciba Co. 243
Cidega Machine Mfg. Co., Inc. 264
Cleaver-Brooks Co. 145
Cleveland Tramrail Div., The Cleveland Crane & Eng'g Co. 8, 9
Clinton Industries, Inc. 295
Clipper Belt Lacer Co. 301
*Cocker Mach. & Fdry. Co. 78
*Cole Mfg. Co., R. D. 266
Columbia Steel Co. 89
Container Corp. of America 63
Cooper Co., Inc., Chas. 266
Corn Products Sales Co. 60
*Crabb & Co., Wm. 209
*Crane Co. 86
*Crane Mfg. Co. 276
Crane Mfg. Co. 218
Crocker-Wheeler Elec. Mfg. Co. 126
*Crompton Knowles Loom Wks. 42
Crompton-Richmond Co., Inc. 272
Cross Cotton Mills Co. 205
Crouse-Hinds Co. 138
*Curtis & Marble Machine Co. 274
Czechoslovak Metal & Eng'g Wks. 268

Dana Warp Mills 307
Darnell Corp., Ltd. 258
*Dary Ring Traveler Co. 290
Day-Brite Lighting Co. 165
*Dayton Rubber Co. 26, 27
Diastafor Div., Standard Brands, Inc. 75
*Dinsmore Mfg. Co. 311
Dodge Mfg. Corp. 277
*Dommerich & Co., L. F. 64
Dow Chemical Co., Dowicides 169
Methocel 124
*Draper Corporation 1
Drew & Co., Inc., E. F. 195
Dronsfield Bros., Ltd. 299
Du Bois Plastic Prod. Co. 310
Duesberg-Bosson of America, Inc. 151
*Du Pont de Nemours & Co., Grasselli Chem. Dept. 257
Paint Div. 147
Rayon Multiple Fibers 186, 187
*Durant Mfg. Co. 254

Edmos Products Corp. 204
Emerson Apparatus Co. 278
Eriez Mfg. Co. 159

Falls Yarn Mills 276
Federal Fibre Corp. 318
*Fidelity Machine Co. 172
Fisher Mfg. Co. 315
Fischer & Porter Co. 236
*Fletcher Works 224
Flintkote Co. 43
Florence Thread Co. 198
*Foster Machine Co. 191
*Fuller Brush Co. 155

Gaylord Container Corp. 130
General Chemical Div., Allied Chem. & Dye Corp. 136
*General Electric Co., Apparatus Dept. 44, 45
General Scientific Equip. Co. 316
Gessner Co., D. 301
Glidden Co., The 71
Globe Dye Works 230
Goodrich Chemical Co., B. F. 22
Grinnell Co., Inc. 153
Gulf Oil Corp.—Gulf Refining Co. 25

*Harwood & Son Geo. S. 276
*Hayes Industries, Inc. 231
Heineman Corp., O., Div. of Aetna Industrial Corp. 194
Henderson Fdry. & Mach. Co., Div., Southern States Equip. Corp. 57
Hercules Powder Co. 65
Herr Mfg. Co. 184
Herrmann, Roy Dr. 276
Hinnekens Mach. Co., Inc., The 66
Holdsworth Gill Screw Co. 33
Houghton & Co., E. F. 197
Houston Pipe Line Co. 234
*Howard Bros. Mfg. Co. 56
*Hunt Machine Co., Rodney 53, 54, 308
*Hunter Machine Co., Jas. 235
*Huyck & Sons, F. C. 306
Hyatt Bearings Div.—General Motors Corp. 267

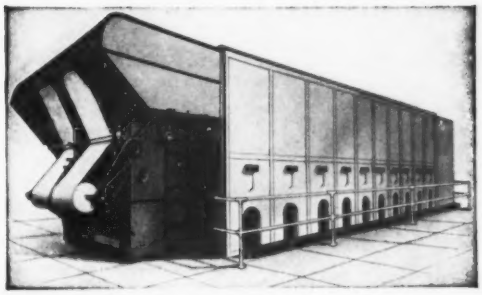
Ideal Machine Shops, Inc. 171
*Industrial Heat Eng'g. Co. 272
*Ingersoll-Rand 16
International Business Mach., Inc. 40
International Salt Co. 281
International Nickel Co. 222
*Ives Co., L. T. 311

Jenkins Bros. 49
*Jenkins Sons, M. W. 242
*Jiffy Textile Marker Co. 310
*Johnson, Chas. B. 289
*Joy Mfg. Co. 67

Kahn & Feldman, Inc. 190
Kastrinsky Mach. Co. 311
Kent Co., Inc. 291
Kearny Mfg. Co. 312
*Kenyon & Son D. R. 313
Kidde & Co., W. 210
Kidde Mfg. Co., Inc. 196
Knitting Arts Exhibition 227
*Kohorn & Co., Ltd., Oscar 14

Lacy, Atherton & Davis 316
*Lambeth Rope Corp. 307
Laminated Sheet Prod. Corp. 310
*Lane Bros. Inc., W. T. 299
*Laurel Soap Mfg. Co., Inc. 208
Lazenby & Co., F. A. 278
Leatex Chemical Co. 280
Leighton Machine Co. 223
Lewellen Mfg. Co. 283
*Link-Belt Co. 7
*Loper Co., Ralph E. 315
Lubriplate Div., Fiske Bros. Refining Co. 303
Luria Engineering Co. 270

Maguire Co., J. P. 283



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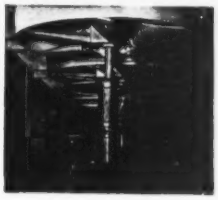
"NATIONAL" Automatic Piece Goods Dryers were developed toward one principal objective . . . *lower drying* costs through faster, more economical operation, greater drying uniformity and the elimination of cost-consuming spoilage and re-runs. In the modern Model E machine, this is accomplished to a degree unequalled in any previous type.



HIGH-VELOCITY FANS are one of the features contributing to faster, more uniform drying in the "NATIONAL" Model E. These are adjustable pitch, aluminum fans developing maximum volume of air per unit horsepower and providing continuous effective air circulation. Direct driven; automatically oil lubricated; easily accessible.

Other factors adding to the greater efficiency and economy of "NATIONAL" Model E Dryers are the revolving-expanding conveyor poles which carry the goods through the machine in evenly spaced festoons without bar marks or creases; and the controlled air diffusion which, in multiple width construction, permits the drying of light and heavy goods at the same time.

Regardless of the kind of equipment you are now using, investigate *all* the advantages offered by the "NATIONAL" Model E . . . the last word in pieces goods drying and curing.

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THE NATIONAL DRYING MACHINERY CO.

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Under the microscope and on the frame you will see proof of the superior quality of **CARTER TRAVELERS.**

You will see the result of a scientific quality control that produces travelers absolutely uniform in weight, temper and shape.

You will see, too, that when you *specify* CARTER TRAVELERS *you can depend on their important contribution to smooth running work, stronger, finer yarns . . .* and production profits.

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Maple Flooring Mfgrs. Ass'n. 250
Marsh Stencil Mach. Co..... 312
*M-B Mfg. Co., Inc..... 252
McPherson Co., The..... 317
*Meadows Mfg. Co..... 134
Mellor, Bromley & Co., Ltd.. 278
Merrow Machine Co..... 309
*Milton Machine Works..... 274
Minnesota Mining & Mfg. Co 238
Mobilift Corp. 30
Moisture Register Co..... 318
*Monsanto Chemical Co.,
Merrimac Div. 50, 51
Phosphate Div. 161
Morrison Mach. Co..... 41
*Mt. Hope Machy. Co..... 287
*Murdock & Geb Co..... 315

*National Aniline Div., Allied Chem. & Dye Corp..... 35
*National Drying Mach. Co.... 333
National Lead Co. 28
National Plastic Products Co. 173
*National Ring Traveler Co.. 307
National Tube Co..... 89
*New Departure Div., General Motors 13
N. Y. & N. J. Lubricant Co. 289
Nopco Chemical Co. 68

*Oakite Products, Inc..... 293
*Onyx Oil & Chem. Co..... 188
Orr & Sembower..... 297
Owens - Corning Fiberglas Corp. 37

Pabst Sales Co. 296
*Page Madden Co., Inc..... 285
Parkinson Mfg. Co..... 303
Parks-Cramer Co. 298
Penick & Ford Co., Ltd..... 313
*Perfecting Service Co..... 332
*Perkins & Sons Inc., B. F.. 70
Philadelphia Quartz Co..... 268
*Pittsburgh Corning Corp..... 91
Platt Bros. (Sales) Ltd..... 34
Powell Co., Wm., The..... 36
Prince George Hotel..... 314
*Prince, Smith & Stells..... 31
*Procter & Gamble..... 255
*Proctor & Schwartz, Inc..... 216

Railway Express Agency Inc., Air Express Div 170
Rayonier, Inc. 237
Red Ray Mfg. Co. 304
Regnery Corp., F. L. 286
*Reiner Inc., Robt. 200, 201
Reliance Elec. & Eng'g Co.... 225
Remington Rand Inc. 240
Republic Steel Corp. 79
*Rhoads & Sons, J. E. 5
Richmond Oil, Soap & Chem. Co. 278
*Riggs & Lombard Inc..... 24
Robert & Co. Associates, Inc., Inside Front Cover
Rome Soap Mfg. Co. 313
Rostan Machy. & Equip. Co.. 297
Royersford Needle Wks.. 92
Ryerson & Son Inc., J. T..... 122

*Saco Lowell Shops..... 6
*Sandoz Chemical Wks..... 17
*Sarco Co., Inc..... 301
*Scholler Bros., Inc..... 183
*Scott Testers, Inc..... 333
Scott & Williams, Inc..... 199
Shell Oil Co. 219
Sims Co., The..... 88
Sinclair Refining Co. 58, 59
Sipp-Eastwood Corp. 244
Sirrine Co., J. E. 318
Socony Vacuum Oil Co., Inc. 15
Solvay Sales Div., Allied Chem. & Dye Corp..... 163
*Sonoco Products Co..... 143
Southern Machy. & Metals Exposition, Inc. 295
*Southern Shuttles Div..... 81
Southern States Equip. Corp., Henderson Fdry. & Mach. Co. Div. 57
Standard-Coosa-Thatcher Co.. 193
*Standard Fabricators, Inc.... 19
Standard Mill Supply Co..... 302
Standard Pressed Steel Co.... 293
*Standard Soap of Camden.... 270
Stanley Works, The..... 245
Stedcote Mfg. Co. 328
*Steel Heddle Mfg. Co..... 81
*Sterling Ring Traveler Co.... 264
Stop-Motion Devices Corp.... 285
Sun Oil Co. 120
*Supreme Knitting Machine Co. 206
Swift & Co., Soap Dept. 47
Synthane Co. 213

Taylor Instrument Cos. 82
Taylor-Stiles & Co. 280
Tennant Co., G. H. 246
Tenn. Coal, Iron & Railroad Co. 89
Tennessee Eastman Corp. 55
Terrell Co. Inc., The..... 167
Texas Co. 2
Textile Banking Co. 174
Textile Machine Wks.....83, 84
Textile Wet Processing Equip. & Supplies Exposition.... 132
*Tompkins Bros., Co. 192
Torrington Co., The.....73, 74
Tower Iron Wks. 20
Turbo Machine Co. 209

U S Bobbin & Shuttle Co.... 52
U. S. Gutta Percha Paint Co. 48
U. S. Ring Traveler Co..... 294
U. S. Steel Corp. 89
U. S. Steel Supply Co..... 39
U. S. Testing Co.....185, 280
*U. S. Textile Machine Co.... 256
*Universal Winding Co.....18, 156

*Van Vlaanderen Machine Co. 23
*Veeder-Root, Inc.....Back Cover
Victor Ring Traveler Co.... 62

WAK Industries 292
*Wallerstein Co., Inc..... 85
Watson-Williams Mfg. Co.. 317
West Disinfecting Co..... 241
*Westinghouse Electric Corp.. 215
Lamp Div. 221
Micarta Div. 29
Sturtevant Div. 202, 203
Water Coolers Div..... 263
West Point Fdry. & Mach. Co. 80
*Whitin Machine Works..... 226
*Whitinsville Spinning Ring Co. 307
Whitman & Co., Wm..... 300
Wildman Mfg. Co. 220
Willcox & Gibbs Sewing Mach. Co. 61
Wolstenholme Co., The..... 307
Wyandotte Chemical Corp... 259

York Corp. 271

■

PROFESSIONAL SERVICES

Barnes Textile Associates 306
Herrmann, Roy Dr. 276
Lacy, Atherton & Davis 316
Lancaster, Allwine & Rommel .. 321
Loper & Co., R. E. 315
McPherson Co. 317
Robert & Co., Assoc. ..Second Cover
Sirrine Co., J. E. 318

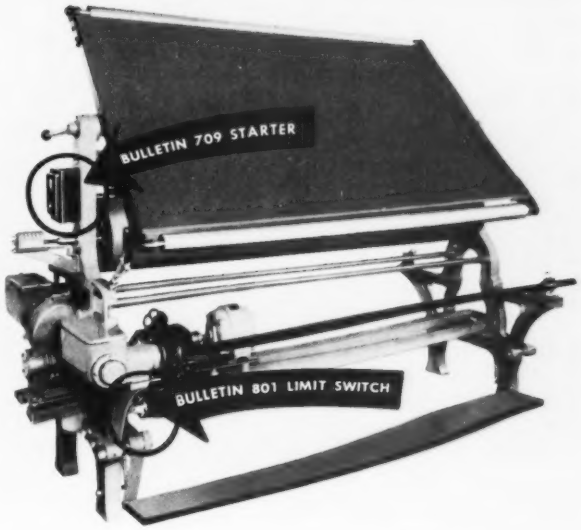
■

SEARCHLIGHT SECTION
(Classified Advertising)

EMPLOYMENT
Positions Vacant..... 321
Selling Opportunities Offered. 321
Positions Wanted 321, 322
Employment Services 321
SPECIAL SERVICES 322
Contract Work 322
BUSINESS OPPORTUNITIES Offered 322
PROPERTY
For Sale 322
Wanted 322
EQUIPMENT (Used or Surplus New)
For Sale 322-331
WANTED
Equipment 322
Miscellaneous 322

ADVERTISERS INDEX

Aerofiber Export, Ag. 321
Ainslie Knitting Machine Co.. 330
American Air Compressor Co. .. 331
Bay State Textile Co. 328
Bendix Chemical Corp. 322
Bialek & Co., Theodore 331
Blank, Moe 326
Blank Co., Inc., A. & M. 330
Bresani, Joseph 328
Cadgene Machy. Co. 330
Chemical Service Corp. 322
Collins & Aikman Corp. 324
Consolidated Products Co., Inc. 326
Crescent Corp. 327
Domeman, Lawrence 322
Dwyer, Michael T. 330
Eagle Industries, Inc. 324
Gaines Textile Machinery Co. .. 330
Gates, Walter S. 328
Hall & Jansson Co. 322
Industrial Spray Painting Co.. 322
Kimmel Machinery Co., Leon .. 331
Lending Trimming Co. 372
Lowinger & Co., Paul F. 328
Machinery Liquidating Co. 323
McCaffrey & Son, Inc. 330
McCloskey, Inc., John J. 330
McDowell Associates, Inc. 325
Miller Machinery Co. 328
New England Products Co. 322
Rabinowitz & Sons, William 331
Raymond Service, Inc., Chas. P. 321
Republic Textile Equip. Co. .. 324
Seckler, Eugene 328
Speizman Co., Inc., Morris.... 329
Stave & Zisblatt 326
Stopford, Joseph E. 322
Textile Auxiliaries 326
Triangle Processing Machy. Co. 330
Wheeler Co., Frank W. 328
Wilson-Lewith Machinery Corp. 326
Windle & Co., J. H. 328



Cloth Examining Machine manufactured by Werner Machine Company, Passaic, New Jersey.

ELECTRIC PEDAL CONTROL

makes this examining machine SIMPLE and EASY to USE

Simply by stepping on the footboard of the Werner Examining Machine, the operator can conveniently START and STOP the driving motor. The footboard operates an Allen-Bradley limit switch which, in turn, controls the motor starter. Allen-Bradley solenoid starters are good for millions of trouble-free operations, because they have only one moving part. They protect the motor against overloads and disconnect the motor during line failure.

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A-B Quality

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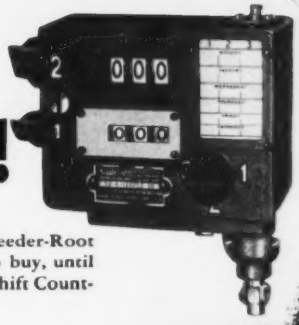

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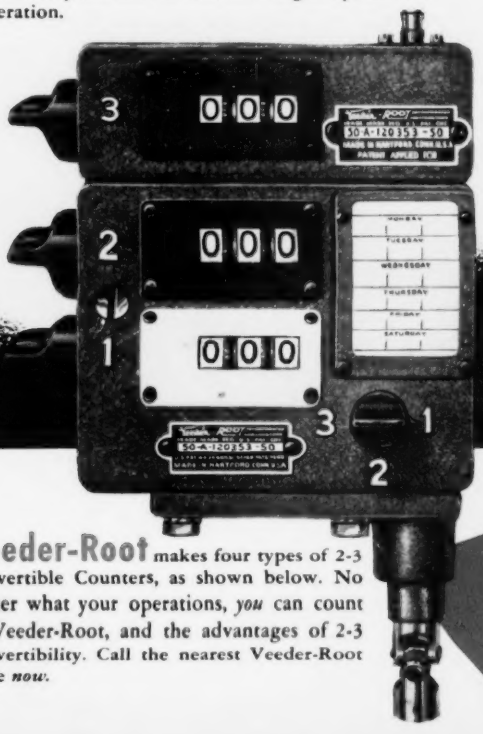

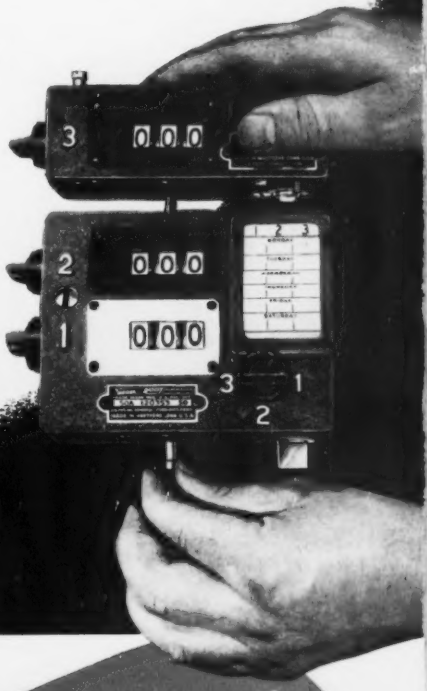

Veeder-Root makes four types of 2-3 Convertible Counters, as shown below. No matter what your operations, *you* can count on Veeder-Root, and the advantages of 2-3 Convertibility. Call the nearest Veeder-Root office *now*.

...only VEEDER-ROOT makes 2-3 CONVERTIBLE COUNTERS

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